New Connections: Exploring Ireland's International Marine Research Partnerships

A Review of Irish Participation in EU Marine Research Projects 2007-2010

December 2011

Marine Institute
Foras na Mara

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The focus of the International Co-operation Programme, a unit of SPDS, is to "actively engage in defining and influencing European Marine Science and Technology policies, strategies and research programmes; add value to the Sea Change Strategy by ensuring appropriate links with and access to matching EU RTD Funds; and provide information to researchers to facilitate and maximise Irish participation in competitive EU funded marine RTD programmes".

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New Connections

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A Directory of Ireland's International Marine Research Projects 2007 – 2010

December 2011

Compiled by:

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Strategic Planning & Development Services
Marine Institute

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Forward

International co-operation is an essential ingredient of a successful research, development and innovation strategy. This is recognised at a European level and supported through a number of co-operative research, development and innovation programmes which join up the three sides of the innovation triangle ***education, research and innovation/ entrepreneurship***. This is also recognised at a national level and its importance emphasised by the Advisory Council for Science, Technology and Innovation (ACSTI) in its 2008 Report "Ireland's International Engagement in Science, Technology and Innovation. It is a cornerstone of our own national Marine Knowledge, Research and Innovation Strategy – the Sea Change Strategy (2007-2013).

Maintaining existing international partnerships and generating new ones, particularly in the new and exciting areas at the forefront of Science, Technology and Innovation, greatly strengthens national capacity and enables Irish researchers and research-based SMEs stay at the forefront of the knowledge economy. It also creates bridges to foreign markets for a range of globally traded knowledge-based products and services. An example of this is the new advanced marine technology programme being pioneered by the SMARTOCEAN initiative.

While at one level, this report is a directory or compendium of Irish participation in cooperative EU funded research, development and innovation projects, at another, it is a homage to those Irish marine researchers in public and third level institutions and in research-based SMEs who compete successfully at a European level, flying the flag for Ireland and promoting our island of research, innovation and culture.

This report is a successor to ***Oceans of Opportunity–II*** (2007) *which reviewed* Irish participation in the EU's FP6 Programme (2002-2007). In **New Connections** we expand the range of cover to include other EU Programmes such as **INTERREG-IV**, ***Life+ and Erasmus Mundus*** and cover a shorter period (2007-2010), to the mid-point of the Programmes reviewed.

Already in the period 2007-2010, Irish marine researchers are involved in 98 co-operative projects, working with European and non-European partner organisations from 58 countries, and drawing down and leveraging grant-aid in excess of €37 million in projects with a total value of over €490 million. The FP7 component of this (€23.7m) represents over 8% of the total Irish draw down from FP7 to the end of 2010. This is a clear indication of the quality and capacity of the Irish marine research community and its high international standing.

Indeed as we go to press, we are aware of a further 30 projects with grant-aid well in access of €7 million which are approved subject to successful contract negotiation.

But it is not just about money, participation in competitive international research, development and innovation projects:

- adds significant value to national research funding investments;
- ensures that our research efforts are meeting the most demanding international standards;
- facilitates achievement of the necessary scale of effort whereby national priorities can be more effectively addressed;
- supports mobility and career development, enhances domestic quality and stimulates innovative thinking;
- supports research at a regional scale that would not be possible by a single country on its own;
- helps to reduce duplication and fragmentation of effort;
- enhances access to international state of the art facilities;
- strengthens international alliances and opens commercial opportunities for globally traded knowledge based products and services.

Dr. Peter Heffernan, MRIA
Chief Executive - Marine Institute
December 2011

1. General Introduction

1.1. Introduction

The European Union provides grant-aid through a number of competitive research, development and innovation programmes in support of EU Structural, Cohesion, Regional Development, Research and Training policies and strategies (e.g. the Integrated Maritime Policy for the European Union (2007); Europe 2020, the Innovation Union, A Resource Efficient Europe, etc). These Programmes play, and have played, a major role in facilitating and supporting Irish participation in collaborative European marine research, development and networking projects.

The benefits of participation in these European research and development projects, in addition to welcome grant-aid, are many and include that they:

- add significant value to national research funding investments;
- ensure that our research efforts are meeting the most demanding international standards;
- facilitate the achievement of the necessary scale of effort whereby national priorities can be more effectively addressed;
- support mobility and career development, enhances domestic quality and stimulates innovative thinking;
- support research at a regional scale that would not be possible by a single country on its own;
- help to reduce duplication and fragmentation of effort;
- enhance access to international state of the art facilities;
- strengthen international alliances and opens commercial opportunities for globally traded knowledge based products and services.

1.2. Aims & Objectives

The aims and objectives of this Report are three-fold:

- to describe the range and scope of Irish participation in competitive EU funded marine research, development, innovation and training programmes;
- to encourage interested researchers and SMEs to find out more about EU funding opportunities and the benefits they can bring by illustrating what is already underway and who are the Irish participants;
- to facilitate complementarities and synergies with nationally funded marine projects by identifying what is being supported under the various EU grant-aid schemes.

1.3. Structure of Report

This Report "New Connections" covers the period 2007 – 2010, which is the half way point of the programmes in question which run from 2007 to 2013. It deals separately with four competitive EU funding programmes, namely:

- 7th Framework Research Programme (FP7) – Section 2 (64 projects);
- The Regional Development INTERREG-IV Programme – Section 3 (32 projects);
- The LIFE+ Environment Programme - Section 4 (1 project);
- The Erasmus Mundus Scholarship and Academic Cooperation Programme – Section 5 (1 project).

Sections 2 to 5 describe specific programmes, identify who can participate, indicate how well Irish researchers perform, describe who Irish participants cooperate with (favoured partner countries), identify the top Irish performers and, where appropriate, identify links to and synergies with the Sea Change Programme. Each project is summarised in a one page project profile giving specific information on that project.

The various Annexes also provide valuable information:

Annex 1	Lists all Irish participating organisations, indicating the organization type (public research institute, third level institution, SME, etc) and which programmes they participate in;
Annex 2:	Provides a list of all National EU Funding Programme Contact Points;
Annex 4:	Provides a listing of all projects by acronym – listed alphabetically;
Annex 5:	Provides details (websites) on where to find further information.

1. General Introduction

1.4. Overview

Ninety-eight individual projects are profiled. These projects involve 64 individual Irish organisations of which 22% are third level institutions, 13% are public research institutions and 44% are SMEs (Annex 1). These projects in turn represent hundreds of international partnerships and linkages and represent in excess of €37.1 million in EU competitive grant-aid to Irish organizations in projects with a total value of over €490 million.

The scope, content, focus and partner eligibility rules differ from Programme to Programme and it is important to be clear what the Programme is trying to achieve, if you are eligible and under what terms and conditions you are eligible. The 7th Framework Programme (Section 2), for example, seeks to strengthen the scientific and technological base of European industry and encourage international competitiveness while promoting research that supports EU policies. The INTERREG-IV Programme (Section 3), of which there are six strands relevant to Irish participants, seeks to support the implementation of European Regional Policies through co-operative actions, networking and technology and knowledge transfer. The LIFE+ Programme (Section 4) is the EU financial instrument designed to support environmental and nature conservation projects. The Erasmus Mundus Programme (Section 5) is designed to promote scholarship and academic co-operation including graduate exchange programmes.

The listed Programmes provide unique opportunities suited to different needs and National Contact Points are appointed to advise potential participants on the best match. (Annex 2).

1.4.1. Who can participate?

EU funding programmes are open to all legal entities based in the European Union and in Associated States with which the Union has a science and technology co-operation agreement. The programmes are highly competitive and must involve participants from more than one Member State. It is essential to check with the specific rules and regulations pertaining to each individual programme. SMEs, for example, are particularly welcome in the FP7 Programme, but are encouraged to participate in INTERREG-IV programmes through their trade and representative associations. The LIFE+ Programme is designed with public bodies in mind, while ERASMUS is confined, in the main, to third level institutions.

1.4.2. How well do Irish participants perform

Irish marine research and development organisations, and in particular the third level sector, perform very well in the FP7 and INTERREG-IV Programmes. It is only recently that opportunities under the LIFE+ and Erasmus Mundus Programmes have been recognised.

Irish organisations currently lead in 14% of the 98 projects identified.

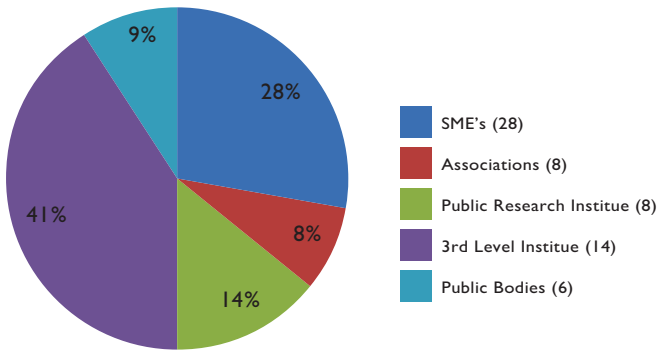

Figure 1.1
Distribution of grant-aid amongst 3rd Level Institutes (41%), SME's (28%), Public Research Institutes (14%), Public Bodies (9%) and Associations (8%) for FP7, INTERREG, Life+ and Erasmus Mundus projects. The number of each organisation type is shown in parentheses.

1. General Introduction

1.4.3. Who do Irish partners co-operate with.

Irish participants co-operate with partners from 58 different countries (Figure 1.2). Not surprisingly, participation is greatest with our closest neighbours reflecting both common interests and geographical perspectives.

1.4.4. What is the typical grant-aid received

Grant aid varies from programme to programme and can range from 40% to 75% of eligible costs, with 100% funding available for some networking and training programmes. Grant-aid to individual Irish partnerships is typically in the range €100k to €500k, with 9 Irish partner organisations receiving over €1 million (Figure 1.3). This compares well with national FP7 figures reported by the National FP7 Support Office for 2007-2010.

1.4.5. Other benefits

Other benefits are identified include employment, specialised training and access to specialised infrastructures.

Employment: Between December 2010 and January 2011, the Marine Institute undertook an exploratory survey of the employment (researcher contracts) potential of participation in EU projects. Based on returns from 73 projects, 153 new "temporary" research and research support posts, including 20 PhD scholarships were identified (Table 1.1).

Specialised Training: EU Training Programmes, such as the FP7 People Programme (Marie Curie Training Networks) and the Erasmus Mundus Programme, can include specialised and advanced training courses (including Summer Schools), PhD scholarships, Post doctoral fellowships and training through research.

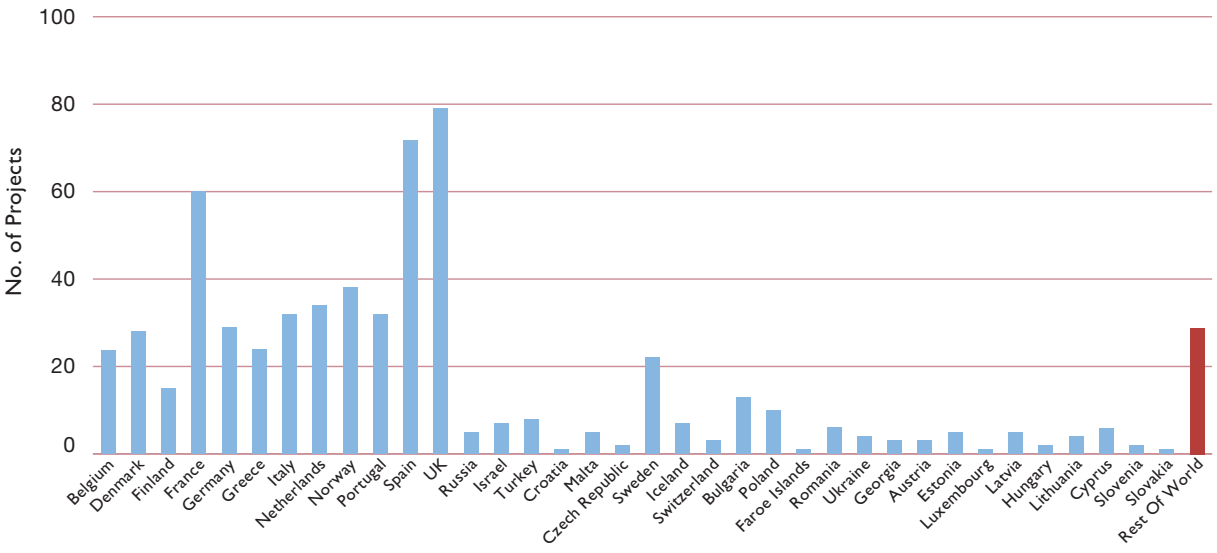

Figure 1.2

No. of projects (FP7, INTERREG-IV, Life+ and Erasmus Mundus) where Irish partners collaborate with partners from different countries.

1. General Introduction

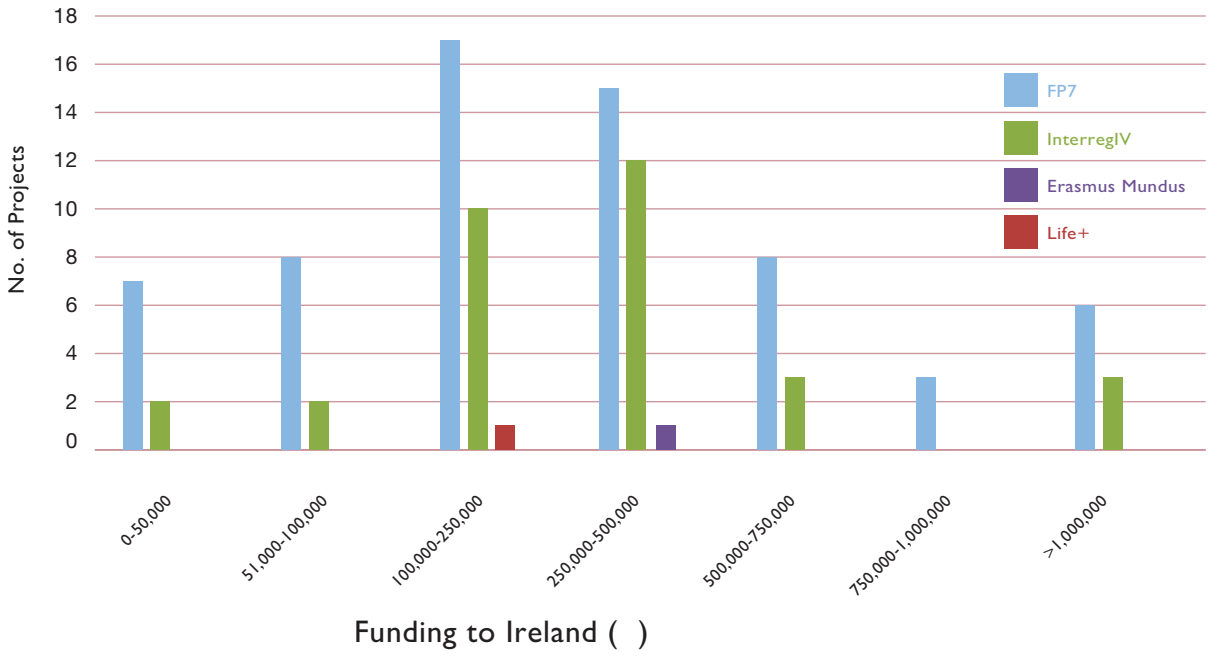

Figure 1.3
Levels of funding received by Irish partners for FP7, INTERREG-IV, Life+ and Erasmus Mundus projects.

Access to Research Infrastructures: In addition to direct funding, participation in EU projects provides access to specialised expertise and state-of-the-art infrastructures not available in Ireland. This can be facilitated through direct assess programmes such as the FP7 Infrastructure projects EuroFLEETS, MaRINET, AQUAEXCEL and JERICO or through project partnerships wherein Irish researchers can gain access to the specialised infrastructures of the partner organisation. Over a quarter of participants interviewed indicated that their involvement in an EU project allowed them access to EU research infrastructures, including IT Infrastructure and data, specialist laboratory facilities, ocean energy test facilities, observatories and European research vessels.

Organisation Type	Researchers	Technicians	Other	PhD scholarships	TOTAL
3rd Level Institution	75	0	7	18	100
Public Research Institution	13	3	2	2	20
Public Body	0	0	2	0	2
SMEs	16	2	5	0	23
Trade Associations	0	0	8	0	8
TOTAL	**104**	**5**	**24**	**20**	**153**

Table 1.1:
New research capacity created as a result of Irish involvement in EU projects. Note this analysis is based on a survey of 73 projects.

NOTES

SEVENTH FRAMEWORK PROGRAMME

Project Profiles

Marine science and technology is a priority cross-cutting theme in FP7.

During the period 2007-2010, Irish marine researchers and research-based SMES won over 8% of the national FP7 drawdown.

The €50 billion 7th EU Framework Programme for Research and Technological Development (2007-2013) is the European Commission's main tool for supporting competitive and collaborative research to respond to Europe's needs in terms of jobs and competitiveness, and to maintain leadership in the global knowledge economy in support of the Europe 2020 Strategy.

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FP7 Project Profiles

Cooperation

Theme 2: Agriculture, Food, Fisheries & Biotechnology

Theme 3: Information and Communication Technologies

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2. An Introduction to FP7 (2007-2013)

2.1 What is FP7?

The 7th EU Framework Programme for Research and Technological Development, or FP7 for short, is the European Commission's main tool for supporting competitive and collaborative research to respond to Europe's needs in terms of jobs and competitiveness, and to maintain leadership in the global knowledge economy (Europe 2020 Strategy). FP7 has a budget of over €50 billion over the period 2007-2013, which represents a substantial increase compared with the previous Framework Programme (FP6) and a reflection of the high priority given to research in Europe.

Knowledge and the knowledge triangle: research, education and innovation, lie at the heart of the European Union's strategy to become the "most dynamic competitive knowledge-based economy in the world" (Lisbon Strategy 2000) and the more recent Europe 2020 Strategy (2010) reviving the economy of the European Union to include "smart, sustainable, and inclusive growth"

The 7th Framework Programme has two main strategic objectives:

- To strengthen the scientific and technological base of European industry;
- To encourage international competitiveness, while promoting research that supports EU policies.

2.2 Who can participate in FP7?

The FP7 Programme is open to all legal entities, though different participation rules apply, depending on the particular research initiative and status of the participant (e.g. public research organisation, third level institution, SME, etc). FP7 is divided into 4 major blocks (excluding Nuclear Research), each containing a number of Sub-Programmes or Priority Themes (Table 2.1.).

Grant-aid (circa 50% - 75% of eligible costs), in order to co-finance research, technological development and demonstration projects, is determined on the basis of calls for proposals and a peer review process, which are highly competitive. In order to complement, and not duplicate, national research programmes, activities funded from FP7 must have a "European added value". One key aspect of this European added value is the trans-national component of actions: research projects are carried out by consortia which include participants from different European (and other) countries; fellowships in FP7 require mobility over national borders.

Framework Programmes (FPs) have been the main financial tools through which the European Union supports research and development activities covering almost all scientific disciplines. FPs are proposed by the European Commission and adopted by Council and the European Parliament following a co-decision procedure.

FPs have been implemented since 1984 and cover a period of five years with the last year of one FP and the first year of the following FP overlapping. FP7 differs in that it will run for seven years, from January 2007 to December 2013 and is designed to build on the achievements of its predecessor towards the creation of the European Research Area (ERA) and carry it further towards the development of the knowledge economy and society in Europe.

Official FP7 website:
http://cordis.europa.eu/fp7/understand_en.html

2. An Introduction to FP7 (2007-2013)

	Themes	Budget (€mill) (as of Dec 06)	%
COOPERATION	Health	6,100	12.1
€32.4 billion 64%	Food, Agriculture and Fisheries, and Biotechnology	1,935	3.8
	Information and Communication Technologies	9,050	17.9
	Nanosciences, Nanotechnologies, Materials and new Production Technologies	3,475	6.9
	Energy	2,350	4.7
	Environment (including Climate Change)	1,890	8.2
	Transport (including Aeronautics)	4,160	8.2
	Socio-economic Sciences and the Humanities	623	1.2
	Security and Space	2,830	5.6
IDEAS / New Frontiers €7.5billion 15%	European Research Council - Experienced/Senior Researchers - New Researchers	7,510	14.9
PEOPLE / Mobility	Marie Curie Actions	4,750	9.4
€8billion	Research Infrastructures	1,715	3.4
16%	Research for the benefit of SMEs	1,336	2.6
	Regions of Knowledge	126	0.2
CAPACITIES €4.1billion 8%	Research Potential	340	0.7
	Science in Society	330	0.7
	Coherent development of research policies	70	0.1
	Activities of International Co-operation	180	0.4
Non-nuclear actions of the Joint Research Centre		1,751	3.5
Total EC		**50,521**	

Table 2. 1 Structure and Budget breakdown of the Seventh Framework Programme of the European Community (2007-2013).

FP7 does not have a specific marine thematic area, however pressure from Member States, including Ireland, led to "marine science and technology" being designated as "a priority cross-cutting theme in FP7" (the Galway Declaration, EurOCEAN Conference 2004). According to a recent Commission analysis (EU, 2010) an estimated €733 million has been dedicated to 345 marine projects, accounting for 6.5% of the financial contribution awarded by the EU to all proposals selected, in the period 2007-2008. This "cross-cutting prioritisation" has greatly benefited marine researchers as each FP7 Programme and Priority Theme is therefore open to marine related proposals.

2. An Introduction to FP7 (2007-2013)

2.3 How well do Irish researchers compete in FP7?

The FP7 Programme represents a major source of competitive R&D funding for Irish marine researchers and research-based SMEs. Over the period 2007-2010, 43 Irish marine researcher groups including research-based SMEs (Annex 1) are participating in 64 FP7 collaborative projects, drawing down over €23.7 million in grant-aid and participating in collaborative European research projects worth over €410 million.

Ireland currently leads nine FP7 marine projects (Table 2.2). Overall, Irish participation includes 9 Third level Institutes, 5 Public Research Institutes, 25 SMEs, and 4 Trade Associations (Annex 1). Of the €23.7 million awarded to Irish partners, 15% goes to Public Research Institutes, 36% the Third Level Sector, 40% to SME's and 9% Trade Associations (Figure 2.1)

Irish researchers compete very well in FP7 Priority 2 (Food, Agriculture, Fisheries and Biotechnology), Priority 5 (Energy), Priority 6 (Environment), Priority 7 (Transport), and the People and the Capacities Programmes (Figures 2.2 and 2.3).

The areas of most benefit to Irish research groups under the Capacities Programme are: Research for the Benefit of SMEs (6 projects) and Research Infrastructures (12 projects).

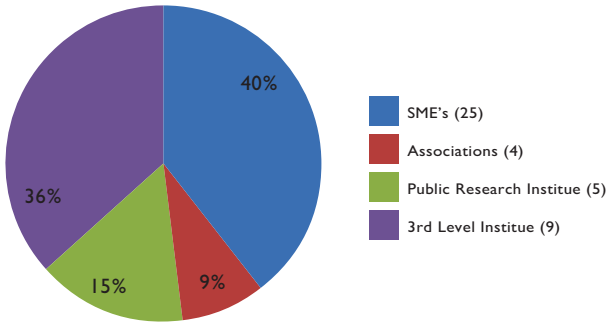

Figure 2.1
Percentage of total FP7 EU funding allocated to Public Research Institutes (15%), Third Level Institutes (36%), SME's (40%) and Trade Associations (9%). The number of each organisation type is shown in parentheses.

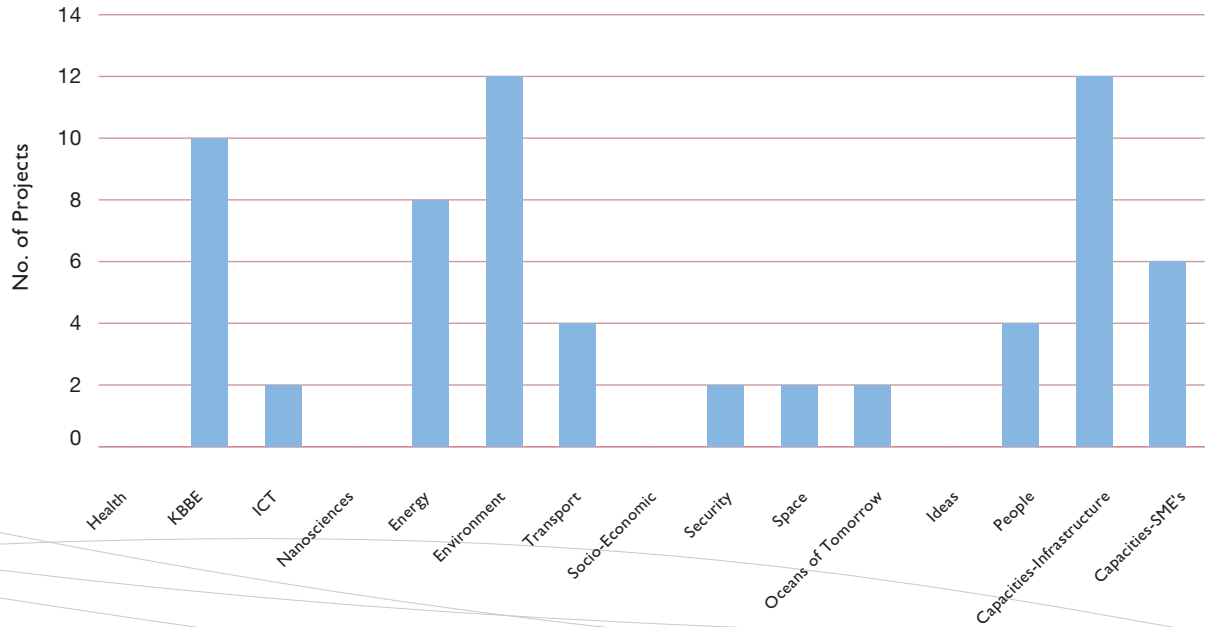

Figure 2.2. Number of EU FP7 funded marine research projects under the FP7 Programme Thematic Priority Areas with Irish participation (2007-2010).

2. An Introduction to FP7 (2007-2013)

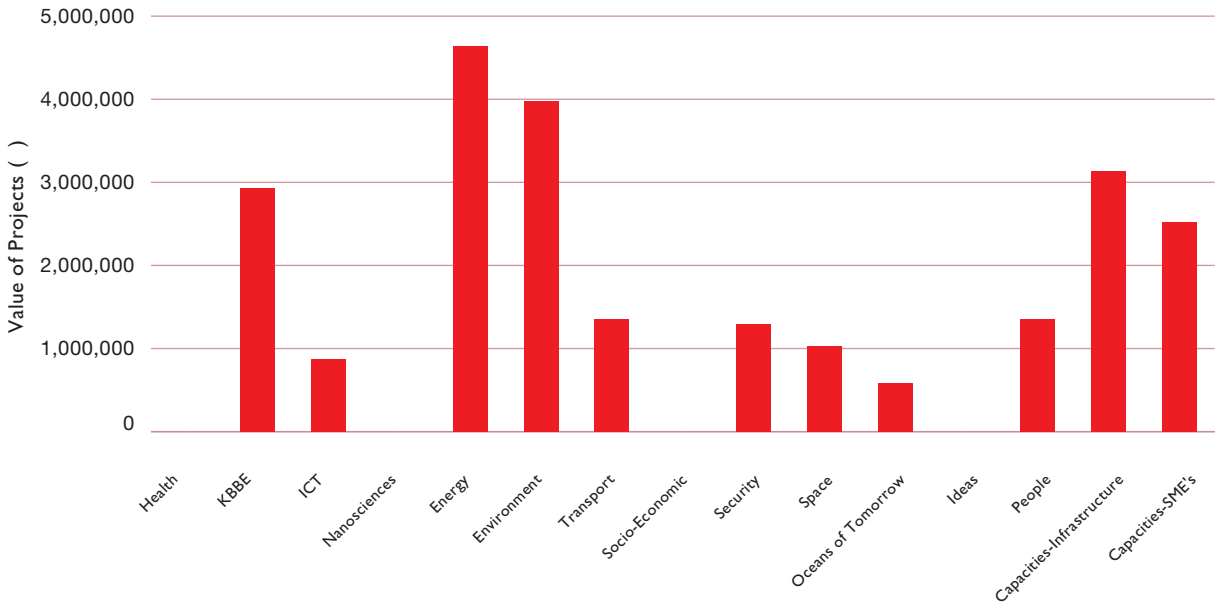

Figure 2.3. Value (€) of EU FP7 funded marine research projects under the FP7 Programme Priority Thematic Areas 2007-2010.

To-date, no marine projects with Irish participation have been funded under Priority 1 (Health), Priority 4 (NanoSciences), Priority 8 (Socio-Economics and Humanities) or under the Ideas (New Frontiers) Programme.

The grant-aid to Irish partners in FP7 projects ranges from zero (i.e. reimbursement of travel and subsistence from another partners budget) to over €1m, but is mainly in the range €100-€300k (Figure 2.4) which equates to the national average for FP7.

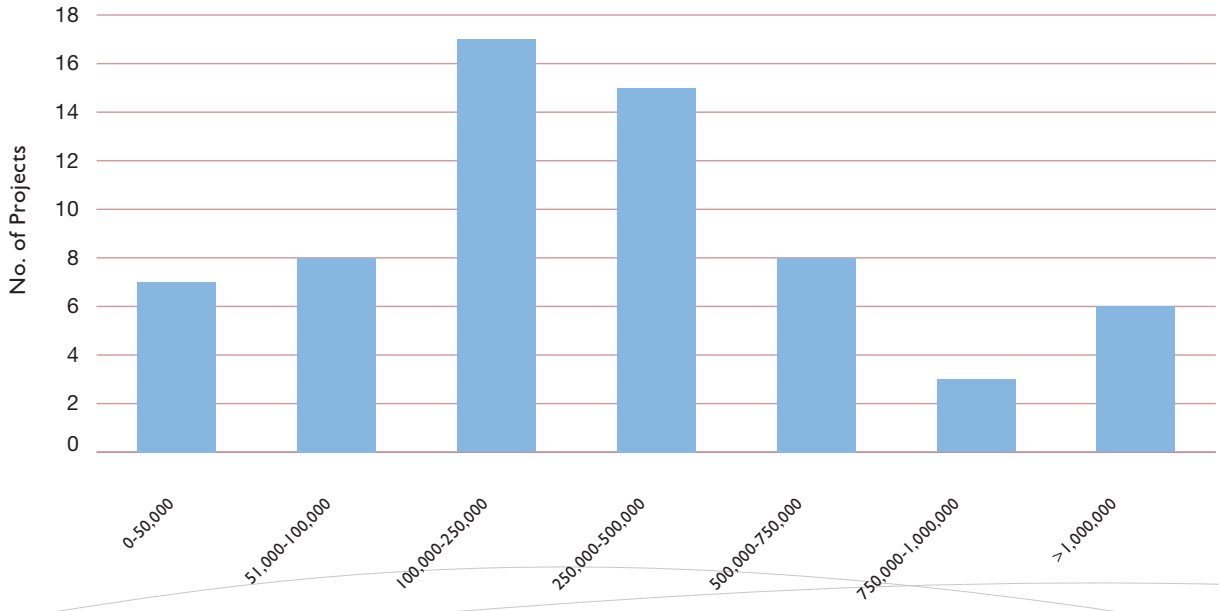

Figure 2.4: Levels of funding (€) received by Irish partners for FP7 projects.

2. An Introduction to FP7 (2007-2013)

2.4 Who does Ireland co-operate with?

Of the 64 FP7 projects in which Ireland participates, 20% are led by the UK, 16% by France, 14% by Ireland, 11% by Norway and 9% by Germany (Figure 2.5). Nine projects (14%) are led by Irish Research Groups (Table 2.2). The number of partners per project varies between 1 and 37 with an average of circa 16 and an ideal of circa 10 partners.

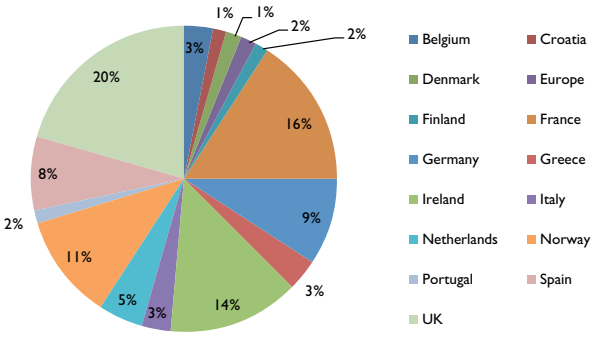

Figure 2.5
Breakdown of countries which lead EU FP7 funded marine research projects with Irish participation.

2.5 Who are the top Irish marine FP7 performers?

Performance can be gauged by either (a) who leads an FP7 project or (b) the total grant-aid accumulated by a particular organisation or institute.

Nine FP7 Projects are led by Irish organisations (Table 2.2). Five project leaders come from the Third Level Sector and include: NUIG (2 projects); UCC-HMRC (2 projects) and the Limerick Institute of Technology (1 project). Industry is well represented by DOMMRS (2 projects) and Wavebob Ltd (1 project) and one association (AquaTT).

University College Cork (UCC) represented by the Hydraulics and Maritime Research Centre (HMRC-UCC) and the Marine and Coastal Research Centre (CMRC-UCC) participate in 19 FP7 projects, leading two renewable ocean energy projects (CORES and MaRINET,) and drawing down grant-aid of €5.6 million (23%). Other top performers include the Marine Institute (14 projects – €2.8 million - 12%) and NUI-Galway (9 projects – €1.5 million - 6%). Top private sector performers include Wavebob (one project - €2.1 million - 9%), AquaTT (6 projects - €1.6 million – 7%), Nautical Enterprise Centre Ltd. (4 projects - €1.1 – 5%), and the Daithi O'Murchu Marine Research Station - DOMMRS (2 projects - €742,535 – 3%).

ACRONYM	Project Title	Lead Partner	No. of partners
AIRSEA	Air-sea fluxes of climatically relevant gases in the marine atmospheric boundary layer	NUIG	N/A
ASIMUTH	Applied Simulations and Integrated Modeling for the Understanding of Toxic and Harmful Algal Blooms	DOMMRS Ltd.	11
BAMMBO	Sustainable production of biologically active molecules of marine based origin	LIT	11
CORALFISH	Assessment of the interactions between corals, fish and fisheries in order to develop monitoring and predictive modelling tools for ecosystem based management in the deep waters of Europe and beyond	NUIG	
CORES	Components for Ocean Renewable Energy Systems	UCC (HMRC)	16
MABFUEL	Marine Algae as Biomass for Biofuel	DOMMRS Ltd.	13
MaRINET	Marine Renewables Infrastructure Network for Energy Technologies	UCC (HMRC)	7
MarineTT	European Marine Research Knowledge Transfer and Uptake of Results	Aqua TT Ltd.	28
STANDPOINT	Standardisation of Point Absorber Wave Energy Convertors by Demonstration	Wavebob Ltd.	2

Table 2.2 FP7 Projects led by Irish Research Groups. AIRSEA is a PEOPLE/Marie Curie Fellowship based in NUI-Galway.

2. An Introduction to FP7 (2007-2013)

2.6 FP7 and the National Sea Change Strategy:

In 2010/2011 (December 2010- March 2011), the Marine Institute undertook a preliminary analysis of the contribution of FP7 projects to the aims and objectives of the national Sea Change Strategy (Annex 3). Sixty collaborative FP7 projects (out of a total of 64), drawing down over €23 million in grant-aid (total EU/Member State investment: >€295.8million) were identified and asked to complete an on-line questionnaire. Responses were received from 51 (85%) of the 60 projects surveyed. These responses indicated that FP7 made a significant contribution to the aims and objectives of the Sea Change Strategy and in particular to Objective 3 (informing public policy) and Objective 2 (building new research capacity). They also provided support for over 89 new scientific positions including 60 new researcher posts, 22 technicians and other support staff as well as 7 PhD scholarships (Table 2.3).

2.7 Useful References

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Data	3rd Level Institute	Association	Public Research Institute	SME	Grand Total
Researchers	20	0	3	14	37
Research Assistants	18	0	5	0	23
Technicians	0	0	3	2	5
Other	5	6	1	5	17
PhD	5	0	2	0	7
TOTAL	**48**	**6**	**14**	**21**	**89**

Table 2.3. New research capacity created as a result of Irish involvement in FP7 projects. Note: this analysis is based on a 70% response rate (rounded to the nearest whole number).

Aquainnova - Supporting governance and multi-stakeholder participation in aquaculture research and innovation

Product Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 2: Food, Agriculture & Fisheries and Biotechnology
Funding Scheme: Coordination and Support Action
Project Duration: 2009- 2012
Total Project Value: € 989,281
EU Grant-Aid: € 989,281
Funding to Ireland: € 179,455
Website: http://www.eatip.eu

Project Description

The AquaInnova Project seeks to establish an operational framework for dialogue (based on best governance practices) between the aquaculture industry, the research community and policy makers, focusing on exploiting the potential for innovation and technological development in the European aquaculture value chain. It will actively promote the exploitation, dissemination and communication of Community aquaculture RTD research actions and results, looking to improve the manner in which the knowledge generated is efficiently and effectively managed, disseminated and transferred. This will be achieved using expert groups working on different thematic areas of aquaculture and developing innovative methodologies for gap analysis and problem solving. These will be supported by sectoral benchmarking documents.

Draft Vision Documents and Strategic Research and Innovation Agendas will be the subject of multi-stakeholder consultation in regional workshops. Dissemination materials will include new technical summaries on Community RTD and an interactive assessment of the benefits of RTD projects. Active dissemination actions will include consumer organisations and the professional and research communities. Improving knowledge transfer and uptake is a core component, applying effective communication channels, tools and resources for maximum impact. AquaInnova will develop and provide a structured and operational platform that will facilitate networking and consultation, while providing consensus on the associated Vision Documents, Strategic Research Agendas and Action Plans for implementation in support of the European Aquaculture Technology and Innovation Platform (EATiP).

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Project Partners	
Project Coordinator	European Aquaculture Technology and Innovation Platform (EATiP) (Belgium)
Ireland	Aqua TT Ltd.

AQUAMED - The future of research on aquaculture in the Mediterranean region

General Information
Funding Programme 7th Framework Programme (FP7)
Sub-Programme: Theme 2: Food, Agriculture, Fisheries and Biotechnology
Funding Scheme: Coordination and Support Action
Project Duration: 2010-2013
Total Project Value: € 996,854
EU Grant-Aid: € 996,854
Funding to Ireland: € 132,894
Website: www.aquamedproject.net

Project Description

The rapid development of Mediterranean aquaculture is increasingly confronted with a set of difficulties such as inadequate production systems and competition with other users. Aquaculture development in the Mediterranean countries is characterized by diverse levels of maturity in respect to research and development structures and capacities. Coastal zones are of strategic importance to the EU. Many European citizens live, holiday and work in these areas and they are a major source of our food and raw materials. Consequently, a knowledge-based strategy for the sustainable development of Mediterranean aquaculture has to be implemented using a flexible and concerted approach.

AQUAMED will promote innovative Mediterranean research and focus on the most relevant issues needed to sustain aquaculture in the region. It will strengthen the EU-Mediterranean partnership in developing common projects, and in planning for the challenges Mediterranean aquaculture faces, now and into the future.

AQUAMED will make a valuable contribution to the Mediterranean Partnership enabling southern and eastern Mediterranean countries to collaborate with their EU counterparts. This cooperation will facilitate capacity building to enhance the harmonisation of aquaculture and research policies in the Mediterranean basin. The main achievements of AQUAMED will be:

- Coordinated research activities across EU Member States and third countries in the Mediterranean region;
- Synergies between stakeholders and a network of partners committed to mutually agreed applied research objectives;
- A sustainability pathway for transnational joint research activities through a multi-stakeholder platform and a long-term structure to be used after the project is completed.

Project Partners	
Project Coordinator	European Fisheries and Aquaculture Research Organisation (EFARO) (France)
Algeria	University of Annaba- Research Laboratory of Marine Bioresources
Croatia	Institute of Oceanography and Fisheries
Egypt	National Institute of Oceanography and Fisheries
France	National Centre for Scientific Research (CNRS)
Ireland	Aqua TT Ltd
Israel	The Agricultural Research Organisation of Israel- The Volcan Centre
Lebanon	Institute of Oceanography and Fisheries
Morocco	National Institute for Fisheries Research (NHRI)
Tunisia	National Institute of Science and Technology of the Sea
Turkey	Ministry of Agriculture and Rural Affairs-General Directorate of Agricultural Research, Central Fisheries Research Institute

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BAMMBO - Sustainable Production of Biologically Active Molecules of Marine Based Origin

Product Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 2: Food, Agriculture & Fisheries and Biotechnology
Funding Scheme: Small or medium-integrated project
Project Duration: 2010-2013
Total Project Value: € 4,208,936
EU Grant-Aid: € 2,992,424
Funding to Ireland: € 660,957
Website: www.bammbo.eu

Project Description

Innovation is the most important engine of growth and jobs in knowledge-based bio-economies. The scope of BAMMBO is ambitious and will provide innovative solutions to overcome existing bottle-necks associated with culturing marine organisms in order to sustainably produce high yields of value-added products for the pharmaceutical, cosmetic and industrial sectors. BAMMBO will screen and identify target marine organisms (e.g. bacteria, fungi, sponges, microalgae, macroalgae and yeasts) from diverse global locations for their potential as sustainable producers of high–added value molecules. The project will apply analytical methods for the extraction, purification and enrichment of targeted bioactive compounds. A detailed life cycle analysis of the production pathways developed in the project will be undertaken to fully evaluate the sustainability of the production of biologically active products from marine organisms. BAMMBO will exploit knowledge and technologies developed during the project and effectively manage their transfer to relevant stakeholders in industry and the research community, as well as to policy-makers.

This project has brought together a multidisciplinary consortium of specialist Research and SME partners representing 8 countries including partners from ICPC countries such as Russia and Brazil, and from EU Member States on the Mediterranean, Adriatic and Atlantic coasts. In adhering to the European Strategy for Marine and Maritime Research, this three year project will encourage capacity-building, integration and synergies across relevant marine sectors. Innovative technologies developed in the project will be demonstrated with the involvement of industry partners, and the results will be of interest not only to companies directly involved in the marine sector, but to other large scale industry players such as pharmaceutical companies with interests in added-value bioactive compounds.

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Project Partners	
Project Coordinator	Limerick Institute of Technology (LIT)
Belgium	Catholic University of Louvain
Brazil	University of Ghent
France	State University of Campinas
Ireland	University of Nice
Italy	Greensea
Portugal	Algae Health Limited, Galway
Russia	University of Genova
Spain	The Polytechnic Institute of Leiria

BIVALIFE - Controlling infectious diseases in oysters and mussels in Europe

General Information
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme:Cooperation, Theme 2: Food, Agriculture & Fisheries and Biotechnology
Funding Scheme: Small or medium-integrated project
Project Duration: 2010-2013
Total Project Value: € 4,459,401
EU Grant-Aid: € 2,995,636
Funding to Ireland: € 395,701
Website: http://wwz.ifremer.fr/bivalife

Bivalife

Controlling infectious diseases in oysters and mussels in Europe

Project Description

The two core objectives of BIVALIFE are (i) to provide innovative knowledge related to pathogens infecting oysters and mussels and (ii) to develop practical approaches for the control of infectious diseases and resulting mortality outbreaks these pathogens induce. The project will address a major issue identified by the European Commission (i.e. detection and management of infectious diseases in oysters and mussels) since the increase in international and intra EU trade and exchanges of animals increases the risk of pathogen transfer and infectious disease outbreak occurrence. In this context, the specific objectives of BIVALIFE are:

- transfer and validate existing methods for detection and identification of oyster and mussel pathogens;
- improve the characterisation of oyster and mussel pathogens and develop innovative complementary diagnostic approaches;
- characterise culture sites in Europe regarding presence of oyster and mussel pathogens in relation to the presence or absence of mortality;
- investigate the life cycle, mechanisms allowing oyster and mussel pathogens to survive outside the host and their original source;
- identify pathogen intrinsic virulence factors and effects on host defence mechanisms;
- assess the relationship between the presence of oyster and mussel pathogens and their role in observed mortality;
- develop methods and recommendations for pathogen control and eradication in Europe.

Project Partners	
Project Coordinator	French Research Institute for the Exploitation of the Sea (IFREMER)
France	National Centre for Scientific Research
Ireland	Marine Institute University College Cork
Israel	Atlantium Technologies Ltd.
Italy	University of Genoa University of Padua
Spain	Spanish National Research Council (CSIC) Agribusiness and Technology Research Institute (IRTA)
The Netherlands	Foundation for Agricultural Research Service
United Kingdom	Department of State for Environment, Food and Rural Affairs (DEFRA)

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COEXIST – Interaction in Coastal Waters: A Roadmap to sustainable integration of aquaculture and fisheries

Product Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 2: Food, Agriculture, Fisheries and Biotechnology
Funding Scheme: Small to medium integrated project
Project Duration: 2010-2013
Total Project Value: €3,777,931
EU Grant-Aid: € 2,995,500
Funding to Ireland: €634,006
Website: www.coexistproject.eu

Project Description

Europe's coastal zones are of great socio-economic value. Population densities are high and coastal zones constitute prime space for development of a range of different activities. They provide a vast supply of food, energy resources, and natural products, and they represent a fertile space for recreation and tourism. The dynamic processes that occur within the coastal zones produce diverse and productive ecosystems which have historically been of great importance for human populations.

However, many of Europe's coastal zones are under pressure to balance competing activities and face potential conflict for space allocation. Stakeholder groups are diverse and represent distinct sectors, such as fisheries, aquaculture, tourism, wind farm operation, and natural conservation areas. Above all, there is a requirement to meet valuable environmental protection rules and regulations.

COEXIST is a broad-based, multidisciplinary project which will evaluate competing activities and interactions in European coastal areas. The COEXIST project will aspire to provide a roadmap to better integration, sustainability and synergies across the diverse activities taking place in the European coastal zone.

COEXIST will promote a harmonised approach for the sustainable use of Europe's seas and oceans. With the commitment of 13 institutions from 10 European countries, the partnership will provide ecosystem modelling tools to support decision-makers on maritime space management choices. Geographically diverse case studies will be considered, representing the conditions and combinations of activities in European coastal areas. These will provide data for further analysis and evaluation. Case study results will be compiled in order to identify benefits and bottlenecks for concomitant development.

COEXIST will publish a roadmap for integration of aquaculture and fisheries with other activities in the coastal zone. Other flagship project outcomes will include:

- Characterisation of relevant European coastal marine ecosystems, their current utilisation and spatial management.
- Evaluation of spatial management tools for combining coastal fisheries, aquaculture and other uses, both now and in the future.

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Project Partners	
Project Coordinator	Institute of Marine Research (IMR) (Norway)
Denmark	Technical University of Denmark (DTU-Aqua)
Finland	Finnish Game and Fisheries Research Institute (FGFRI) Finnish Environment Institute (SYKE)
France	French Research Institute for the Exploitation of the Sea (IFREMER)
Germany	Johann Heinrich von Thünen-Institut (vTI), Institute of Sea Fisheries
Ireland	University College Cork (CMRC) Aqua TT Ltd.
Italy	National Research Council – Marine Sciences Institute (CNR-ISMAR)
Portugal	National Institute of Biological Resources (INRB-IPIMAR) Institute of Marine Research (IMAR)
The Netherlands	Wageningen University & Research centre (IMARES & LEI)
United Kingdom	Centre for Environment, Fisheries and Aquaculture Science(CEFAS)

DeepFishMan - Management and Monitoring of Deep-Sea Fisheries and Stocks

Product Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 2: Food, Agriculture, Fisheries and Biotechnology
Funding Scheme: Small to medium scale collaborative Project
Project Duration: 36 months (2008-2011)
Total Project Value: €3.8m
EU Grant-Aid: €2.9m
Funding to Ireland: €87,189
Website: http://wwz.ifremer.fr/deepfishman
WIKI site http://deepfishman.hafro.is/doku.php

Project Description

Deepwater species pose particular difficulties for fisheries management. Deepwater stocks are difficult to assess resulting in high levels of uncertainty and potential for overfishing. DEEPFISHMAN will develop a range of strategy options for the management of deepwater fisheries for particular species in the NE Atlantic that will take account of these factors. The project will firstly identify new and more effective assessment methods, reference points, control rules and management strategies to be used in the short term, making better use of available data. Secondly, a long-term framework will be developed for which additional data needs will be specified in order to fill current information gaps and to achieve reliable long-term management requirements.

This work will involve a range of case studies selected to reflect the diverse characteristics of the different types of deepwater fishery found in the NE Atlantic. In addition, two case studies outside the NE Atlantic are selected to give a wider perception of the management and monitoring of deepwater fisheries elsewhere in the world. For each case study, current problems with assessment or management will be identified and new methods will be developed and tested. Recommendations for future methods and approaches will be made. The socio-economic profile and projected impact of the management strategy options, as applied both through a short- and long-term framework, will be examined for selected fisheries. In this way the project outputs will aim to provide robust guidelines for deepwater fisheries management suitable for adoption within the Common Fisheries Policy.

Project Partners	
Project Coordinator	French Research Institute for the Exploitation of the Sea (IFREMER)
Greece	Hellenic Center for Marine Research (HCMR)
Iceland	University of Iceland Hafrannsoknastofnun (Marine Research Insitiute)
Ireland	Marine Institute
Namibia	National Marine and Information Research Centre
Norway	Institute of Marine Research
Portugal	INBR-IPIMAR National Institute of Biological Resources
Spain	Fundation AZTI – AZTI Fundazioa Instituto Español de Oceangrafia
United Kingdom	Centre for Environment, Food & Aquaculture Science (CEFAS) Imperial College of Science, Technology and Medicine University of Portsmouth Higher Education Corporation

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ECOKNOWS - Effective use of ecosystems and biological knowledge of fisheries

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 2: Food, Agriculture, Fisheries and Biotechnology
Funding Scheme: Small to medium-integrated project
Project Duration: 36 months (2010-2013)
Total Project Value: €3,731,381m
EU Grant-Aid: €2,993,621m
Funding to Ireland: €119,637
Website: http://www.ecoknows.eu/

Project Description

The general aim of the ECOKNOWS project is to improve knowledge in fisheries science and management. The lack of appropriate calculus methods and fear of statistical over partitioning in calculations, because of the many biological and environmental influences on stocks, has limited reality in fisheries models. This reduces the biological credibility perceived by many stakeholders. ECOKNOWS will solve this technical estimation problem by using an up-to-date methodology that supports more effective use of data. The models will include important knowledge about biological processes. Applied statistical inference methods will allow this knowledge to be integrated when updating stock assessments and importantly calculate the probability of the assessment. The project will use basic biological data (such as growth, maturity, fecundity, maximum age and recruitment data sets) to estimate general probabilistic dependencies in fish stock assessments. In particular it will seek to improve the use of large existing biological and environmental databases, published papers and survey data sets provided by EU data collection regulations and stored by ICES and EU member countries and the extensive information present in FishBase (www.fishbase.org). Bayesian inference will form the methodological backbone of the project and will enable realistic estimations of uncertainty.

The developed methodology will be of importance for implementation of the Ecosystem Approach to Fisheries Management. This has been a difficult challenge for species with long data series, and now the same challenge is given for new and poorly studied species. A Bayesian approach, which enables the incorporations of biological knowledge with data analysis, will improve ways of finding generic and understandable biological reference points, such as the required number of spawning times per fish, and supports management needs in the developing countries. Target species including clupeoids in the Baltic and Atlantic, Atlantic and Baltic salmon, anchovy in the Western Mediterranean and adjacent Atlantic, European hake and shrimp of the Baltic and Norwegian Deep.

The Marine Institute will contribute to a literature review of recent and relevant research on salmon survival and will also contribute to the development of a Bayesian model estimating salmon returns at the North Atlantic scale. The approach taken to estimating Irish salmon returns will also be reviewed.

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Project Partners	
Project Coordinator	University of Helsinki (Finland)
Canada	Fisheries and Oceans Canada
Denmark	International Council for the Exploration of the Sea (ICES)
Finland	Finnish Game and Fisheries Research Institute Abo Akademi University University of Turku
Greece	Aristotle University of Thessaloniki
Ireland	Marine Institute
Philippines	FishBase Information & Research Group Inc.
Spain	Spanish National Research Council
Sweden	Swedish Board of Fisheries
United Kingdom	Imperial College of Science, Technology and Medicine

MEFEPO - Making the European Fisheries Ecosystem Operational

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 2: Food, Agriculture, Fisheries and Biotechnology
Funding Scheme: Small to medium-scale collaborative project
Project Duration: 36 months (2008-2011)
Total Project Value: €4.1m
EU Grant-Aid: €3m
Funding to Ireland: €214,958
Website: http://www.liv.ac.uk/mefepo/

Project Description

Since the reform of the EU Common Fisheries Policy in 2002, significant effort has been devoted to addressing the governance, scientific, social and economic issues required to introduce an ecosystem approach to European marine fisheries. Fisheries management needs to support the 'three pillars of sustainability' (ecological, social and economic). Fisheries Ecosystem Plans (FEPs) were developed to further the ecosystem approach to fisheries management and as a tool to assist managers to consider the ecological, social and economic implications of their decisions.

The core concept of the MEFEPO project is the delivery of an operational framework for three regional sea areas: the North Sea RAC, North-western Waters RAC and South-western RAC (Regional Advisory Council). MEFEPO will focus on how best to make current institutional frameworks responsive to an ecosystem approach to fisheries management at regional and pan-European levels in accordance with the principles of good governance. This will involve the integration of the considerable body of ecological, fisheries, social and economic research which has been developed in recent years. MEFEPO will also investigate how existing institutional frameworks need to evolve to incorporate this information and develop both dialogue between the disparate groups of marine stakeholders and a decision-making process which integrates a wide range of interests.

A key deliverable of the Marine Institute was the production of an Atlas of ecosystem features in North Western Waters (Seas around Ireland) backed up by a comprehensive Technical Report. These documents can help Ireland in meeting some of its obligations under the Marine Strategy Framework Directive. These documents can be downloaded from the MEFEPO website.

MEFEPO
Making the European Fisheries Ecosystem Plan Operational

Project Partners	
Project Coordinator	University of Liverpool (UK)
Denmark	Institute for Fisheries Management & Coastal Community Development
France	Universite de Bretagne Occidentale
Ireland	Marine Institute
Netherlands	Wageningen IMARES
Norway	University of Tromso
Portugal	National Institute of Biological Research IMAR-Instituto Do Mar
Spain	Instituto Español de Oceanografia
United Kingdom	Centre for Environment, Fisheries and Aquaculture Science (CEFAS)

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MG4U - Marine Genomics for Users

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Cooperation Theme 2: Food, Agriculture, Fisheries and Biotechnology
Funding Scheme: Coordination and Support Action (coordinating action)
Project Duration: 36 months (2010-2013)
Total Project Value: €1.12m
EU Grant-Aid: €997,826
Funding to Ireland: €304,355
Website: http://www.mg4u.eu/

Marine Genomics 4 Users

Project Description

Oceans contribute fundamentally to Earth system function through their size, and the diversity, mass and productivity of organisms living within them. Marine waters provide resources and services estimated at 60% of the total economic value of the biosphere. The application of cutting-edge genomic approaches has generated significant new understanding of the marine environment. Rapid progress will continue given the fast rate of technological development in this field. Methods and information are sufficiently mature for direct application to achieve a more competitive European economy, and the generation of knowledge economies in the marine sector. Applications include improving the efficiency of characterisation and mining of marine diversity for biotechnology products and processes that will contribute to the welfare of mankind in a sustainable and environmentally compatible manner. Marine genomics knowledge has enormous potential to assist organisations involved in governance and sustainable management of the marine environment and its resources. However, the direct utility of marine genomics in developing commercial advantage, and in general problem solving is not understood by many decision makers in government and industry. A large amount of valuable marine genomics knowledge is inaccessible to users or exists in non-user-friendly contexts. MG4U responds to the specific call "Learning from research projects: dissemination to potential users in marine genomics" designed to address this critical bottleneck. The call was generated since it is crucial that end-users are aware of both the potential of genomics approaches and the state-of-the-art developments that have taken place in recent EU and other research programmes for genomics to be exploited effectively. MG4U brings together a project consortium containing both scientific excellence and knowledge management specialists to design an innovative and realisable project that can have a measurable impact on the current situation and become a best practice example of effective knowledge transfer.

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Project Partners	
Project Coordinator	National Centre for Scientific Research: Biological Station of Roscoff, France (CNRS/SBR)
Germany	Environmental & Marine Project Management Agency (EMPA)
Ireland	Environmental Research Institute (ERI), University College Cork AquaTT
Portugal	Finnish Game and Fisheries Research Institute University of Algarve: Centre for Marine Sciences (CCMAR)
Spain	Centre of Aquaculture from the Institute for Food and Agricultural Research and Technology (IRTA)
Sweden	University of Gothenburg: Sven Loven Centre for Marine Sciences (SLCMS)

PREVENT ESCAPE - Assessing the causes and developing measures to prevent the escape of fish from sea-cage aquaculture

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 2: Food, Agriculture, Fisheries and Biotechnology
Funding Scheme: Small to medium-scale collaborative project
Project Duration: 36 months (2008-2011)
Total Project Value: €3.9m
EU Grant-Aid: €3m
Funding to Ireland: €201,173
Website: http://preventescape.eu/

Project Description

The escape of fish from sea-cage aquaculture is perceived as a serious threat to natural biodiversity in Europe's marine waters. Escaped fish may cause undesirable genetic effects in native populations through interbreeding and ecological effects through predation, competition and the transfer of diseases to wild fish. The Prevent Escape project will conduct and integrate biological and technological research on a pan-European scale to improve recommendations and guidelines for aquaculture technologies and operational strategies that reduce escape events. Through research focused on sea-cages and their immediate surrounds, the project will:

- Assess technical and operational causes of escape incidents;
- Assess the extent of escapes of reproductive gametes and fish;
- Determine the inherent behaviours that pre-dispose certain species of fish towards escaping; and
- Document the dispersal of escapees to develop and test recapture strategies.

The project will benchmark the performance of equipment under farming conditions and improve operations and equipment production, thereby advancing national and international standards for the design, construction and use of aquaculture equipment. This will ultimately benefit the cage farming aquaculture industry through practical, achievable measures to prevent escapes and mitigate against the genetic and ecological impacts which result from farm escapes.

Project Partners	
Project Coordinator	SINTEF Fiskeri og havbruk AS (Norway)
Greece	University of Crete Hellenic Centre of Marine Research (HCMR)
Ireland	Marine Institute
Malta	University of Malta
Norway	Norweigan Institute for Nature Research (NINA) Norwegian Institute of Fisheries and Food Research (NOFIMA)
Spain	Universidad de Alicante Universidad de Las Palmas de Gran Canaria Tecnalia-AIE
United Kingdom	Scottish Association for Marine Science (SAMS)

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NETMAR - Open service network for marine environmental data

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 3: ICT Programme
Funding Scheme: Small to medium-scale collaborative project
Project Duration: 36 months (2010-2013)
Total Project Value: €3.9m
EU Grant-Aid: €2.97m
Funding to Ireland: €433,000
Website: http://netmar.nersc.no

Project Description

NETMAR aims to develop a pilot European Marine Information System (EUMIS) for searching, downloading and integrating satellite, in situ and model data from ocean and coastal areas. It will be a user-configurable system offering flexible service discovery, access and chaining of distributed environmental services using OGC, OPeNDAP and W3C standards. It will use a semantic framework coupled with ontologies for identifying and accessing distributed data. EUMIS will also enable further processing of such data to generate composite products and statistics suitable for decision-making in diverse marine application domains.

The implementation of EUMIS will be done through a set of case studies from different marine application domains, ranging from near real-time monitoring and forecasting of marine pollution to the exploration of long-term historical time series variables for climate change assessment. Case study topics include monitoring and forecasting of oil spills, plankton blooms and Arctic Sea ice, ecosystem model validation, relationships between physical and biological variables, and coastal web atlases for coastal zone management.

The developed EUMIS subsystems will be based on open source software, and will be offered as contributions to the SISE (Single Information Space in Europe for the Environment) and SEIS (Shared Environmental Information System). The subsystems will also support the implementation of the INSPIRE Directive and be of benefit to the implementation of GMES (Global Monitoring for Environment and Security) and GEOSS (Global Earth Observation System of Systems).

CMRC is leading work packages concerning the specification of the NETMAR System Architecture and Semantic Framework, and the case study on an International Coastal Atlas Network (ICAN) for coastal zone management.

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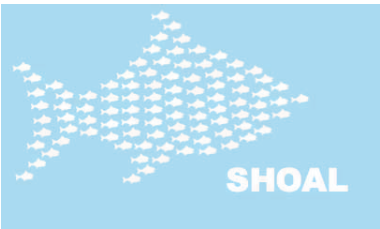
Project Partners	
Project Coordinator	Nansen Environmental and Remote Sensing Centre (NERSC) (Norway)
France	Centre of Documentation, Research and Experimentation on Accidental Water Pollution (CEDRE) French Research Institute for the Exploitation of the Sea (IFREMER
Ireland	University College Cork (CMRC)
Norway	Meteorologisk Institutt (METNO)
United Kingdom	British Oceanographic Data Centre (BODC) Plymouth Marine Laboratory (PML)

SHOAL - Search and Monitoring of Harmful contaminants, other pollutants and leaks in vessels in port using a swarm of robotic fish

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 3: ICT Programme
Funding Scheme: Collaborative Project
Project Duration: 36 months (2009-2012)
Total Project Value: €4,230,000m
EU Grant-Aid: €2,750,000m
Funding to Ireland: €442,863
Website: http://www.roboshoal.com/



Project Description

The aim of the SHOAL project is to develop robotic fish that can monitor pollution in ports. The robotic fish will be equipped with chemical sensors to find pollutants in the water and modems to create an ad hoc network for communication with a shoal of fish. This will allow the shoal of fish to build up a broad map of pollutants moving through the port in real-time, whilst adapting to changes in environmental conditions in the port. The established methods for the detection of pollutants in waters are based on sampling and analysis of discrete water samples. The analysis is performed in laboratories located remotely away from the sampling sites and frequently the chemical analysis is personnel-dependent, time-consuming and expensive.

Specific aims within SHOAL are to explore and develop novel chemical sensor subsystems which can be integrated with the overall robot concept being developed. Thus miniaturized sensors and sensor arrays as well as novel membrane strategies for provision of chemical sensitivity and anti-fouling behaviour are being examined. Given that the state-of-the-art is all lab-based methods, the proposed suggestions will go far beyond the state-of-the-art by implementing these lab-based methods in situ on board the robotic fish.

Project Partners	
Project Coordinator	BMT Group LTD. (UK)
France	Thales Safari
Ireland	Molecular Microsystems, Tyndall National Institute (UCC)
Spain	Port Authority of Gijon
United Kingdom	University of Essex University of Strathclyde

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AQUAFUELS - Algae and Aquatic Biomass for a Sustainable Production of 2nd Generation Biofuels

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 5: Energy
Funding Scheme: Small to medium-scale integrated project
Project Duration: 12 months (2010-2011)
Total Project Value: €869,001
EU Grant-Aid: €747,152
Funding to Ireland: €59,568
Website: www.aquafuels.eu

Project Description

AquaFUELS intends to focus on establishing the state of the art on research, technological development and demonstration activities regarding the exploitation of various algal and other suitable non-food aquatic biomasses for 2nd generation biofuels production. In this frame an overall assessment, critical thinking and reasoning are necessary to draft the lines of future developments. This will respond to the need of understanding the place of algae and aquatic biomass in the present and future renewable energy sources portfolio in the EU, with a careful eye to sustainability and social implications. Such action must involve major stakeholders and define the present situation in a realistic perspective, thus providing a valuable contribution to shape future developments. AquaFUELS aims to draw a detailed, comprehensive and concrete picture of the actual status quo of EU and international initiatives on algae biofuels. Based on this work, AquaFUELS will successively elaborate an overall assessment on the technology, and identify major research and industrial needs. The surveys and assessments produced by AquaFUELS will address the full life cycle analysis - from collection to fuel use - in terms of environmental, economic and social sustainability. A major means to reach project goals will be the coordination of a critical mass of ongoing research activities that will be actively involved in the preparation of surveys as well as in the elaboration of the assessment studies and identification of future needs. Creating and maximizing synergies among these initiatives is one of major project results. Finally, the project will establish the first European Algae Association that will promote mutual interchange and cooperation in the field of algal biomass research, production and use.

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Project Partners	
Project Coordinator	European Biodiesel Board (Belgium)
Belgium	Ghent University
Czech Republic	Institute of Microbiology: The Academy of Sciences of the Czech Republic
France	Diester Industrie International The Roquette Group
Ireland	Ryan Institute, National University of Ireland, Galway (NUIG)
Israel	Ben Gurion University
Italy	University of Florence Studio Martinelli
Netherlands	Wageningen University
Portugal	Necton Algafuel
Spain	University of Almeria
United Kingdom	Imperial College of London

CORES - Components for Ocean Renewable Energy Systems

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 5: Energy
Funding Scheme: Small to medium-scale collaborative project
Project Duration: 36 months (2008-2011)
Total Project Value: €4.5m
EU Grant-Aid: €3.4m
Funding to Ireland: €1,251,966
Website: http://hmrc.ucc.ie/cores/

Project Description

CORES is an FP7 European collaborative research project focusing on new components and concepts for ocean energy convertors.

First generation wave energy devices have been deployed at the shoreline and normally consist of Oscillating Water Column Systems. In order for these systems to progress towards full commercial realisation they must develop into units suited to mass production. This project follows successful FP6 funding in which several fixed Oscillating Water Column Wave Energy Convertors (OWC WECs) were developed to demonstration level. These systems are now evolving from fixed to floating devices in deeper water, further offshore.

The CORES project will concentrate on the development of new concepts and components for power-take-off, control, moorings, risers, data acquisition and instrumentation based on floating OWC systems. The components and concepts developed will have relevance to other floating device types. The impacts of the project will be focused on reducing technical and non-technical risk in the marine environment as well as reducing the cost per kWh of generated energy.

The new components and concepts will be tested on a floating OWC test platform at sea and these real, validated and verified results will be integrated into a holistic system model. This model will provide a Toolbox for wave to wire simulations of complete WEC systems. The Marine Institute Galway Bay Test site is the location for the field test of the project.

Project Partners	
Project Coordinator	BMT Group LTD. (UK)
France	Thales Safari
Ireland	Molecular Microsystems, Tyndall National Institute (UCC)
Spain	Port Authority of Gijon
United Kingdom	University of Essex University of Strathclyde

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EQUIMAR - Equitable Testing and Evaluation of Marine Energy Extraction Devices in terms of Performance, Cost and Environmental Impact

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 5: Energy
Funding Scheme: Small to medium-scale collaborative project
Project Duration: 36 months (2008-2011)
Total Project Value: €5.5m
EU Grant-Aid: €4m
Funding to Ireland: €304,000
Website: https://www.wiki.ed.ac.uk/display/EquiMarwiki/EquiMar

Project Description

The aim of EquiMar is to deliver a suite of protocols for the equitable evaluation of marine energy converters (based on either tidal or wave energy). These protocols will harmonize testing and evaluation procedures across the wide variety of devices presently available with the aim of accelerating adoption through technology matching and improved understanding of the environmental and economic impacts associated with the deployment of arrays of devices.

EquiMar will assess devices through a suite of protocols covering site selection, device engineering design, scaling up of designs, deployment of arrays of devices, environmental impact, in terms of both biological & coastal processes and economic issues.

A series of protocols will be developed through a robust, auditable process and disseminated to the wider community. Results from the EquiMar project will help to establish a sound base for future marine energy standards and will feed into the standards process being coordinated under the IEC Technical Committee.

EquiMar is a collaborative FP7 research and development project involving a consortium of 23 partners from 11 member states, representing nearly all aspects of the marine energy sector from universities and developers through to certification agencies.

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Project Partners	
Project Coordinator	The University of Edinburgh (UK)
Belgium	EU Ocean Energy Association
Denmark	Wave Dragon Aps Aalborg University
France	Electricité de France –SA French Research Institute for the Exploitation of the Sea (IFREMER) Actimar S.A.S
Ireland	University College Cork (HMRC)
Italy	Consiglio Nazionale delle Ricerche: Instituto di Scienze Marine
Netherlands	Teamwork Technology
Norway	Det Norske Veritas
Portugal	Wave Energy Centre
Spain	Fundacion Robotiker
Sweden	Uppsala University
United Kingdom	University of Strathclyde, University of Exeter, University of Manchester, University of Southampton, Pelamis Wave Power Ltd, European Marine Energy Centre, Sea Mammal Research Unit, University of St. Andrews, Scottish Association for Marine Science, Feisty Productions Ltd

MARINA - Evaluation of multipurpose platforms for marine renewable energy

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 5: Energy
Funding Scheme: Large-scale integrated project
Project Duration: 48 months (2009-2013)
Total Project Value: €12,865,513
EU Grant-Aid: €8,733,066
Funding to Ireland: €789,750
Website: http://www.marina-platform.info/

Project Description

The MARINA project is a pan-European project dedicated to bringing offshore renewable energy applications closer to the market by creating new infrastructures for both offshore wind and ocean energy converters. It addresses the need for creating a cost-efficient technology development basis to kick-start growth of the promising European marine renewable energy (MRE) industry in the deep offshore – a major future global market. The project combines deep-water engineering experience from European oil and gas developments during the last 40 years, state-of-the-art concepts for offshore wind energy and the most promising concepts in today's R&D pipeline on wave energy and other marine renewable.

Project Partners	
Project Coordinator	Acciona Energy S.A. (Spain)
Belgium	1-Tech s.p.r.l
Denmark	DONG Energy Power A/S Technical University of Denmark
France	Technip France Ecole Centrale de Nantes
Greece	National University of Athens
Ireland	University College Cork (HMRC)
Italy	Progeco S.r.l.
Netherlands	Corrosion & Water-Control bv
Norway	Norwegian University of Science and Technology (NTNU) StatoilHydro ASA
Portugal	University of Algarve
Spain	Robotiker Foundation
United Kingdom	The University of Edinburgh

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ORECCA - Offshore Renewable Energy Conversion Platforms Coordination Action

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 5: Energy
Funding Scheme: Small to medium-scale integrated project
Project Duration: 24 months (2009-2011)
Total Project Value: €1,599,621
EU Grant-Aid: €1,599,621
Funding to Ireland: €84,000
Website: http://www.orecca.eu

Project Description

The ORECCA project aims to create a framework for knowledge sharing and to develop a research roadmap for activities in the context of offshore renewable energy (RE). In particular, the project will stimulate collaboration in research activities leading towards innovative, cost efficient and environmentally benign offshore RE conversion platforms for wind, wave and other ocean energy resources, for their combined use as well as for the complementary use such as aquaculture and monitoring of the sea environment. ORECCA will overcome the knowledge fragmentation existing in Europe and stimulate the key experts to provide useful inputs to industries, research organizations and policy makers (stakeholders) on the necessary next steps to foster the development of the ocean energy sector in a sustainable and environmentally friendly way.

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Project Partners	
Project Coordinator	Fraunhofer Institute for Wind Energy and Wind Technology (Germany)
Belgium	European Ocean Energy Association European Wind Energy Association ASBL
Canada	University of Waterloo
Denmark	Technical University of Denmark
Ireland	University College Cork (HMRC)
Italy	ERSE- ENEA Research on the Electrical Systems, Enel Produzione. S.P.A., Polytechnic Foundation of Milan, Trevi S.p.A, Ciaotech Srl, Rina Industry S.p.A., National Energy Technology Cluster
Netherlands	Ecofys Netherlands BV Netherlands Energy Research Foundation (ECN)
Norway	Lyse Produksjon AS FOBOX AS National University of Science and Technology (NTNU)
Portugal	National Laboratory for Energy and Geology Wave Energy Centre
Spain	Facilities Inabensa, S.A., Institute of Technology and Renewable Energy, University of Oviedo, Energy Institute of Galicia
United Kingdom	Offshore Wave Energy Ltd., Environmental Research Institute, North Highland College, IT Power Ltd., The University of Edinburgh
U.S.A.	Alliance for Sustainable Energy LLC

STANDPOINT - Standardisation of Point Absorber Wave Energy Convertors by Demonstration

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 5: Energy
Funding Scheme: Collaborative project
Project Duration: 36 months (2008-2011)
Total Project Value: €8,499,534
EU Grant-Aid: €5,096,653
Funding to Ireland: €2,053,012
Website: www.fp7-standpoint.eu

Project Description

In contrast to other renewable energy sources, wave energy conversion is currently at a stage of evolution where it is being demonstrated using a wide range of very diverse technologies and a de facto standard approach is yet to emerge.

A fully functional, but reduced scale (5.5m diameter) prototype Wavebob wave energy converter (WEC) has already been deployed in the Atlantic Ocean for in excess of 3000 hours. STANDPOINT will seek to demonstrate this WEC technology at full size for a further long term Atlantic Ocean deployment, 18 months of which will occur within the timeframe of the STANDPOINT project. Unlike its smaller-scale predecessor, it is intended that this pre-commercial WEC will be grid-connected. The intended location for the deployment is off the Portuguese coast. The indicative dimensions of the WEC for a full-scale deployment in this part of the Atlantic are 18m diameter, 40m draft.

There are 5 partners from 4 member states, including a Certification Body who will develop and disseminate rules and guidelines for wave energy convertors. Innovative SMEs (including the coordinator) and a large power generation company will work together to implement this ambitious full-scale demonstration. The aim is to establish the offshore tuneable-resonance point absorber as the winning wave energy conversion technique by demonstrating the superiority of its power take-off technology, adaptability to changing sea conditions, reliability and survivability.

Project Partners	
Project Coordinator	Wavebob Ltd. (Ireland)
Germany	Germanischer Lloyd Industrial Services GMBH, Hamburg Hydac System GMBH, Sulzbach
Portugal	Molecular Microsystems, Tyndall National Institute (UCC)
Sweden	Generg GND, Lisbon
United Kingdom	Vattenfall AB, Stockholm

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CARBOCHANGE - Changes in carbon uptake and emissions by oceans in a changing climate

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 6: Environment
Funding Scheme: Large-scale integrated project
Project Duration: 36 months (2010-2013)
Total Project Value: €9,510,302
EU Grant-Aid: €6,999,906
Funding to Ireland: €83,160
Website: http://carbochange.b.uib.no/

Project Description

Carbon dioxide (CO_2) emissions from fossil fuel combustion, land use and cement manufacturing are the main agents of human-induced climate change through their impact on the Earth's radiation budget. The ocean has a pivotal role in regulating the atmospheric CO_2 concentration, and it is expected therefore that the ocean will play the leading role for buffering anthropogenic CO_2 emissions in the long term. It is essential for climate mitigation and adaptation strategies, to observe the changing anthropogenic CO_2 uptake, to explain the underlying mechanisms, and to correctly predict its future evolution.

The CARBOCHANGE project addresses these challenges and will provide the best possible process-based quantification of net ocean carbon uptake under changing climate conditions using past and present ocean carbon cycle changes for better prediction of future ocean carbon uptake.

The contribution from the National University of Ireland, Galway (NUIG) is to use the RV Celtic Explorer pCO_2 instrument to build up a picture of the surface seawater CO_2 data around Ireland. In combination with this, NUIG will investigate if the reduction of the North Atlantic uptake of CO_2 is reflected in the atmospheric signal from the CO_2 sites in Ireland, primarily Mace Head.

Project Partners	
Project Coordinator	University of Bergen (Norway)
Denmark	VitusLab
France	French Research Institute for the Exploitation of the Sea (IFREMER) Atomic and Alternative Energies Commission (CEA) University of Pierre and Marie Curie- Paris 6
Germany	Alfred Wegener Institute for Polar and Marine Research Kiel University: Leibniz Institute for Marine Sciences Max Planck Institute for the Advancement of Science (MPG) University of Bremen
Iceland	Hafrannsoknastofnunin (Icelandic Marine Research Institute)
Ireland	National University of Ireland, Galway (NUIG)
Morocco	National Institute of Fisheries Research
Netherlands	Stichting Koninklijk Instituut voor Zeeonderzoek (NIOZ)
Norway	Stiftelsen Nansen Senter for Fjernmaaling UNIFOB AS
South Africa	Council for Scientific and Industrial Research
Spain	Agencia Estatal Consejo Superior de Investigaciones Cientificas Universidad de Las Palmas de Gran Canaria
Sweden	University of Gothenburg
Switzerland	Universitaet Bern
United Kingdom	MET Office, Natural Environment Research Council (NERC), Plymouth Marine Laboratory (PML), University of Bristol, University of East Anglia
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CLAMER - Climate Change and Marine Ecosystem Research Results

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 6: Environment (including Climate Change)
Funding Scheme: Co-ordination and Support Action
Project Duration: 24 months (2009-2011)
Total Project Value: €1,160,771
EU Grant-Aid: €991,365
Funding to Ireland: €7,945
Website: http://www.clamer.eu/

CLAMER
CLIMATE CHANGE & EUROPEAN MARINE ECOSYSTEM RESEARCH

Project Description

The CLAMER project, involving 17 marine research institutes and universities from 10 European countries, builds on the concept that there is a gap between what is known through research and what policy makers and the public know and understand about the effects of climate change on the oceans. This gap needs to be filled to help catalyse the formulation and acceptance of the necessary mitigation and adaptation measures for the marine environment. CLAMER will compile and summarize all existing scientific material and outreach products on this topic (WP1) and carry out a pan-European poll to investigate the awareness/ perception in various European coastal regions (WP2).

CLAMER outreach activities (WP3) aim to raise the awareness of European citizens and society at large to the effects of climate change on the marine environment and its socio-economic consequences. In the build-up to a major international conference in Brussels (15th September 2011), in addition many European marine institutes and aquaria participated in 'marine climate change' side-events in the summer of 2011.

The Marine Institute, the Environment Protection Agency and the Heritage Council of Ireland co-sponsored the extension of the WP2 poll of public awareness of climate change issues to include coverage in Ireland.

Project Partners	
Project Coordinator	Royal Netherlands Institute for Marine Research (NIOZ)
Belgium	Flanders Marine Institute (VLIZ)
Denmark	Danish Meteorological Institute (DMI)
France	Marine Board- European Science Foundation (Ostend/Strasbourg) (MB-ESF) Oceanopolis (SOPAB) University of Brest (UBO-IUEM)
Greece	Hellenic Centre for Marine Research (HCMR)
Ireland	National University of Ireland, Galway (NUIG)
Italy	Marche Polytechnic University (UNIVPM)
Netherlands	Netherlands Institute of Ecology (NIOO-KNAW)
Norway	University of Tromso (UoT)
Spain	Spanish Council for Scientific Research (CSIC)
United Kingdom	Centre for Environment, Fisheries and Aquaculture Science-DEFRA (CEFAS) Plymouth Marine Laboratory (PML) Natural Institute of Oceanography-Natural Environmental Research Council (NOC-NERC) University of East Anglia (UEA) Sir Alister Hardy Foundation for Ocean Science (SAHFOS)

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ComENVIR - Communicating environmental impacts on water quality, availability and use

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 6: Environment (including Climate Change)
Funding Scheme: Concerted and Support Action (CSA)
Project Duration: 36 months (2009-2012)
Total Project Value: €960,000
EU Grant-Aid: €870,000
Funding to Ireland: €34,200
Website: http://www.eusem.com/main/CE/comenvir

Project Description

The ComEnvir project aims to narrow the gap between EU sponsored environmental research and European citizens. Water (resources, quality, pollution and biodiversity issues) has been chosen as a common theme to be addressed by the project. It will cover environmental stressors, waste treatment, health effects, biodiversity, risks and therefore the role of water quality in its different environmental locations (fresh water, marine, soil, and air). Results will be communicated to two specific groups - the primary target groups are teachers and students, and the second target group is the general public.

The overall project objectives are to:

- Empower the European citizens to constructively engage in scientific dialogue and debate;
- Inform European consumers of the latest scientific advances in the food sector;
- Strengthen science education in classrooms; and
- Promote scientific curiosity among the youth.

The Irish partner, EcoServe Ltd., will prepare a book chapter on the results and the implications of the latest EU funded research in the area of marine water quality and biodiversity. EcoServe Ltd. is also involved in contributing towards an educational video clip on this topic and in the outreach of the material in Ireland once it has been completed.

The contribution from the National University of Ireland, Galway (NUIG) is to use the RV Celtic Explorer pCO2 instrument to build up a picture of the surface seawater CO2 data around Ireland. In combination with this, NUIG will investigate if the reduction of the North Atlantic uptake of CO2 is reflected in the atmospheric signal from the CO2 sites in Ireland, primarily Mace Head.

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Project Partners	
Project Coordinator	Ludwig Maximilians University (Germany)
Germany	Visions Unlimited Medien GmbH ECT Oekotoxikologie EmbH
Ireland	Ecological Consultancy Services Ltd.
Italy	The Water Research Institute (IRSA)
Netherlands	Probio Partners VOF
Norway	Hedmark University College
Spain	Spanish National Research Council
Sweden	Karolinska Institute

CORALFISH - Assessment of the interaction between corals, fish and fisheries in order to develop monitoring and predictive modelling tools for ecosystem based management in the deep waters of Europe and beyond

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 6: Environment (including Climate Change)
Funding Scheme: Large-scale integrated project
Project Duration: 48 months (2008-2012)
Total Project Value: €10,885,692
EU Grant-Aid: €6,499,906
Funding to Ireland: €1,076,494
Website: http://www.eu-fp7-coralfish.net/

Project Description

The CoralFISH project will assess the interaction between corals, fish and fisheries, in order to develop monitoring and predictive modelling tools for ecosystem based management in the deep waters of Europe and beyond.

The rationale for CoralFISH is based on the need to address UN General Assembly Resolution 61/105 (2006) which calls on fisheries management organisations worldwide to assess the impact of bottom fishing on vulnerable marine ecosystems, identify and map vulnerable ecosystems and develop conservation and management measures to prevent their degradation.

In European deep waters there is a need to establish monitoring tools to evaluate the effectiveness of closed areas for the conservation of biodiversity and fish and their impact on fisheries. Two FP6 projects (PROTECT, HERMES) have already identified the need for information concerning the interaction between fish and cold water coral habitats.

CoralFISH brings together a unique consortium of deep-sea fisheries biologists, ecosystem researchers/ modellers, economists and a fishing industry SME, who will collaborate to collect data from key European marine eco-regions. The consortium numbers 16 partners from 10 countries.

Project Partners	
Project Coordinator	National University of Ireland Galway (NUIG) (Ireland)
France	French Research Institute for the Exploitation of the Sea (IFREMER)
Germany	Friedrich-Alexander- Universität Erlangen-Nürnberg Universität Bremen
Greece	Hellenic Centre for Marine Research (HCMR)
Iceland	Marine Research Institute (Hafrannsóknastofnunin)
Ireland	O'Malley Fisheries University College Cork (CMRC)
Italy	Consorzio Nazionale Interuniversitario per le Scienze del Mare
Netherlands	Koninklijke Nederlandse Akademie van Wetenschappen – Nederlands Instituut voor Ecologie Stichting Koninklijk Nederlands Instituut voor Onderzoek der Zee
Norway	Institute of Marine Research University of Tromso
Portugal	Instituto do Mar –Centros dos Açores, Departmento de Oceanografia e Pescas
United Kingdom	Zoological Society of London, Institute of Zoology The University Court of the University of Aberdeen

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EELIAD - European Eels in the Atlantic: Assessment of their decline

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 6: Environment (including Climate Change)
Funding Scheme: Small to medium-scale collaborative project
Project Duration: 48 months (2008-2012)
Total Project Value: €4m
EU Grant-Aid: €2.6m
Funding to Ireland: €112,809
Website: http://www.eeliad.com/

Project Description

EELIAD is a research initiative to investigate the ecology and biology of European eels. The information gained will be integrated into models to determine the most important factors that influence silver eel production and migration success. The fulfilment of this objective will provide a means to evaluate the likely success of the EU Eel Recovery Plan, to enable management actions to be most effectively directed to enhance and conserve eel stocks across Europe, and to determine the dynamics of eel population structure and reproductive success.

Field studies on migration routes, behaviour and spawning, will be supported by the use of cutting edge biotechnological analyses to determine population structure, and innovative modeling approaches that will incorporate these data into fishery management models. EELIAD will link with other groups and projects, such as INDICANG (a network of monitoring programmes that report on the status and the development of eel populations over the Atlantic Area) and the joint EIFAC/ICES Working Group on Eels.

The knowledge gained from the EELIAD project, aside from its scientific significance, will be of direct use to the conservation of eel stocks as it will help to clarify the reasons for the recent decline in the stock. This information will then be used to change and improve the way that eel fisheries and habitats are managed across Europe, and to help ensure that enough silver eels migrate to their spawning grounds to reproduce and sustain the species.

The contribution from the National University of Ireland, Galway (NUIG) is to use the RV Celtic Explorer pCO2 instrument to build up a picture of the surface seawater CO2 data around Ireland. In combination with this, NUIG will investigate if the reduction of the North Atlantic uptake of CO2 is reflected in the atmospheric signal from the CO2 sites in Ireland, primarily Mace Head.

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Project Partners	
Project Coordinator	Department of State for Environment, Food & Rural Affairs (DEFRA) Centre for Environment, Fisheries and Aquaculture Science (CEFAS)
Denmark	Dept of Inland Fisheries, Danish Institute of Fisheries Research
France	French Research Institute for the Exploitation of the Sea (IFREMER) Centre for Agricultural and Environmental Engineering Research (Cemagref) Muséum National d'Histoire Naturelle Laboratoire de Mathématiques Appliquées (UPPA_LMA) Laboratoire de Biologie et d'Ecologie Tropicale et Mediterraneenne (LBETM)
Ireland	Marine Institute Inland Fisheries Ireland
Norway	Norwegian Institute for Nature Research
Spain	Consejo Superior de Investigaciones Científicas
Sweden	Swedish Board of Fisheries

EUROBASIN - European Union Basin-scale analysis, synthesis and integration

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 6: Environment (including Climate Change)
Funding Scheme: Large-scale integrated project
Project Duration: 36 months (2010-2013)
Total Project Value: €9,613,310
EU Grant-Aid: €6,996,407
Funding to Ireland: €17,000 (T&S only)
Website: http://www.euro-basin.eu/

EURO-BASIN
BASIN SCALE ANALYSIS, SYNTHESIS AND INTEGRATION

Project Description

EURO-BASIN is designed to advance our understanding on the variability, potential impacts, and feedbacks of global change and anthropogenic forcing on the structure, function and dynamics of the North Atlantic and associated shelf sea ecosystems as well as the key species influencing carbon sequestering and ecosystem functioning. The ultimate goal of the program is to further our capacity to manage these systems in a sustainable manner following the ecosystem approach. Given the scope and the international significance, EURO-BASIN is part of a multidisciplinary international effort linked with similar activities in the US and Canada. EURO-BASIN focuses on a number of key groups characterising food web types: e.g. diatoms versus microbial loop players; key species such as copepods of the genus Calanus; pelagic fish (herring, mackerel, blue whiting) which represent some of the largest fish stocks on the planet; piscivorous pelagic bluefin tuna and albacore, all of which serve to structure the ecosystem and thereby influence the flux of carbon from the euphotic zone via the biological carbon pump. In order to establish relationships between these key players, the project identifies and accesses relevant international databases and develops methods to integrate long term observations. These data will be used to perform retrospective analyses on ecosystem and key species/group dynamics, which are augmented by new data from laboratory experiments, mesocosm studies and field programs. These activities serve to advance modelling and predictive capacities based on an ensemble approach where modelling approaches such as size spectrum; mass balance; coupled nutrient-phytoplankton-zooplankton-detritus; fisheries; and "end to end" models and as well as ecosystem indicators are combined to develop understanding of the past, present and future dynamics of North Atlantic and shelf sea ecosystems and their living marine resources.

Project Partners	
Project Coordinator	University of Hamburg (Germany)
Denmark	Technical University of Denmark
Germany	University of Bremen
Iceland	Hafrannsoknastofnunin Marine Research Institute
Ireland	Marine Institute University College Cork (UCC) Galway-Mayo Institute of Technology (GMIT)
Spain	AZTI Foundation
United Kingdom	National Environment Research Council (NERC) Plymouth Marine Laboratory (PML) University of East Anglia Sir Alister Hardy Foundation for Ocean Science University of Strathclyde Department of State for Environment, Food and Rural Affairs (DEFRA) Swansea University

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HERMIONE - Hotspot Ecosystem Research and Man's Impact on European Seas

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 6: Environment (including Climate Change)
Funding Scheme: Small to medium-scale collaborative project
Project Duration: 36 months (2009-2012)
Total Project Value: €10,884,787
EU Grant-Aid: €7,998,955
Funding to Ireland: €262,164
Website: http://www.eu-hermione.net

Project Description

The HERMIONE project is designed to make a major advance in the knowledge of the functioning of deep-sea ecosystems and their contribution to the production of goods and services. HERMIONE will achieve its objective through a highly interdisciplinary approach (including biologists, ecologists, microbiologists, biogeochemists, sedimentologists, physical oceanographers, modelers and socio-economists) that will integrate biodiversity, specific adaptations and biological capacity in the context of a wide range of highly vulnerable deep-sea habitats. Gaining this understanding is crucial, because these ecosystems are now being affected by climate change and impacted by man through fishing, resource extraction, seabed installations and pollution.

To design and implement effective governance strategies and management plans we must understand the extent, natural dynamics and interconnection of ocean ecosystems and integrate socio-economic research with natural science. The study sites include the Arctic, North Atlantic and Mediterranean and cover a range of ecosystems including cold-water corals, canyons, cold and hot seeps, seamounts and open slopes and deep-basins. The project will make strong connections between deep-sea science and user needs. HERMIONE will enhance the education and public perception of the deep-ocean issues through some of the major EU aquaria. These actions will create a platform for discussion between a range of stakeholders, and contribute to EU environmental policies.

Project Partners	
Project Coordinator	Natural Environment Research Council (UK)
Belgium	Universiteit Gent
France	ArchimediX, Mockl & Munzel Gesellschaft burgerlichen Rechts (GbR), French Research Institute for the Exploitation of the Sea (IFREMER), Centre National de la Recherce Scientifique (CNRS), Université Pierre et Marie Curie – Paris 6
Germany	Leibniz-Institut für Meereswissenschaften, Alfred-Wegener-Institut Für Polar- und Meeresforschung, Friedrick-Alexander Universitaet Erlangen-Nuremberg, Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V., Jacobs University Bremen GmbH, MARUM - University Bremen
Greece	Hellenic Centre for Marine Research (HCMR), University of Thessaly
Ireland	National University of Ireland Galway (NUIG) University College Cork (UCC) - Environmental Research Institute (ERI) -
Italy	Consiglio Nazionale delle Richerche, Consorzio Nazionale Interuniversitario per le Scienze del Mare, Costa Edutainment SpA – Acquario di Genova
Netherlands	Stichting Koninkjilk Nederlands Instituut voor Zeederzoek, Koninklijke Nederlandse Akademie Van Wetenschappen
Norway	Universitetet i Tromso, Havforskningsinstituttet (Institute of Marine Research)
Portugal	Instituto Hidriografico, Universidade de Averio, Universidade dos Açores
Russia	P.P. Shirshov Institute of Oceanology – Russian Academy of Sciences
Spain	Universitat de Barcelona, Consejo Superior de Investigaciones Científicas,, MEDIAN SCP
Sweden	Göteborgs Universitet
United Kingdom	Cardiff University, University of Southampton, University of Aberdeen, The University of Liverpool, Scottish Association for Marine Science, National Marine Aquarium (Plymouth)
United Nations	UN Environment Programme- World Conservation Monitoring Centre

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KNOWSEAS - Knowledge-based Sustainable Management for Europe's Seas

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 6: Environment (including Climate Change)
Funding Scheme: Large-scale integration project
Project Duration: 48 months (2008-2012)
Total Project Value: €7.3m
EU Grant-Aid: €5.8m
Funding to Ireland: €128,341
Website: http://www.knowseas.com/

Project Description

Europe's four regional seas (Baltic, Black, Mediterranean and NE Atlantic) have suffered severe environmental degradation due to human pressure. Existing measures to manage pressures have proven inadequate and the EC has responded by preparing new policy (an Integrated Maritime Policy for the European Union, 2007) and environmental legislation (Marine Strategy Framework Directive, 2008). These instruments rely on the Ecosystem Approach, a management paradigm that encompasses humans and the supporting ecosystem. But the science base for this approach needs strengthening and practical tools must be developed and tested for policy implementation. In particular, criteria for assessing costs and benefits of management actions are poorly developed, particularly in the complex marine environment where multiple uses and management conflicts are common.

The KnowSeas consortium will strengthen the science base for managing Europe's seas through the practical application of systems thinking. It will work at the two scales envisaged for emergent EU policy: the Regional Sea Scale and Member State Economic Exclusive Zones (EEZs). It will develop a new approach of Decision Space Analysis to investigate mismatches of scale. Knowledge created through the FP6 European Lifestyles and Marine Ecosystems project, augmented with necessary new studies of climate effects, fisheries and maritime industries - in EEZ case studies - will provide a basis for assessing changes to natural systems and their human causes. New research will examine and model economic and social impacts of changes to ecosystem goods and services and costs and benefits of various management options available through existing and proposed policy instruments. Institutional and social analysis will determine conflicts of interest and examine governance as well as stakeholder values and perceptions. KnowSeas research will develop and test an assessment toolbox through regional liaison groups and a multi-sectoral Project Advisory Board.

Project Partners	
Project Coordinator	University of Plymouth (UK)
Bulgaria	Institute of Oceanology, Bulgarian Academy of Sciences
Denmark	University of Southern Denmark
Finland	Suomen ymparistokeskus
Germany	Alfred-Wegener-Institut fuer Polar-und Meeresforschung GKSS-Forschungszentrum Geesthacht GmbH
Ireland	University College Cork (CMRC)
Italy	Institute for Atmospheric Pollution of the Italian National Research Council, University of Padua, Universitá Ca' Foscari di Venezia
Netherlands	Deltares, EUCC0 The Coastal Union, Royal Netherlands Academy of Arts and Sciences, ,Vereniging voor christelijk hoger onderwijs, wetenschappelijk onderzoek en patientenzorg
Norway	Norsk institutt for Luftforskning, University of Bergen
Poland	Morski Instytut Rybacki, Sea Fisheries Institute
Portugal	Instituto do Mar, Megapesca Lda
Spain	Consejo Superior de Investigaciones Científicas
Sweden	University of Stockholm
Turkey	Middle East Technical University
United Kingdom	Center for Environment, Fisheries & Aquaculture Science (CEFAS),, Envision Management Ltd., Institute for European Environmental Policy, Sir Alistair Hardy Foundation for Ocean Science, Scottish Association for Marine Science,, University of East Anglia, University of Bath

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MarineTT - European Marine Research Knowledge Transfer and Uptake of Results

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 6: Environment (including Climate Change)
Funding Scheme: Co-ordination and Support Action
Project Duration: 24 months (2010-2012)
Total Project Value: €871,336
EU Grant-Aid: €787,000
Funding to Ireland: €492,146
Website: http://www.marinett.eu/

MarineTT

Project Description

Knowledge is a major source of competitive advantage in business. European marine research projects could play a pivotal role in the sustainable development of our natural resources and in knowledge-based ocean governance. The European Commission has funded almost 600 marine research projects through the 6th and 7th Framework Programmes, worth more than €1.1 billion, which represents a significant financial and human investment in marine research and development. However, a considerable proportion of this potentially valuable knowledge is idle because key stakeholders are not aware of its existence. Not all of the new knowledge generated has had the expected impact, largely due to the familiar obstacles impeding knowledge transfer between research institutions and third parties.

MarineTT will step up to the challenge to unlock the knowledge potential of previously funded research activities using an innovative approach to address the problem:

- Gain a more comprehensive overview of the knowledge generated by reviewing research outcomes and identifying which could be potentially exploited.
- Devise and trial an innovative evaluation mechanism to identify the research outcomes with the most potential for exploitation.
- Connect and transfer knowledge to key stakeholders.

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Project Partners	
Project Coordinator	Aqua TT Ltd. (Ireland)
Portugal	EurOcean – The European Centre for Information on Marine Science & Technology

MESMA - Monitoring and Evaluation of Spatially Managed Areas

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 6: Environment (including Climate Change)
Funding Scheme: Large-scale integrated project
Project Duration: 48 months (2008-2012)
Total Project Value: €8.4m
EU Grant-Aid: €6.6m
Funding to Ireland: €325,069
Website: http://www.mesma.org/

MESMA

Project Description

The increasing pressures upon the marine realm call for a well planned approach of further spatial development of this area. An ecosystem-based approach to fisheries, the increasing demand for sustainable energy, coastal defence systems, building materials and safe transport routes and the need to protect habitats and species all compete for the same valuable space. At the same time climate change will alter the composition and functioning of marine ecosystems, calling for a robust approach of future spatial planning that also takes cross boundary developments into account.

MESMA will supply innovative methods and integrated strategies for governments, local authorities, stakeholders and other managerial bodies for planning and decision making at different local, national and European scales. This will also comprise an easy accessible information system to gain support from politicians, stakeholders and the public in general for difficult (inter)national decisions that will be needed for sustainable use and protection of this vulnerable area. This data system, containing information on the distribution of habitats and species, economic values and benefits and human uses and its effects will also be an interface between science, policy and decision makers.

MESMA will supply strategic tools for sustainable development of European seas and coastal areas. The major challenge is to combine an optimized use with a sustained ecosystem of high quality, taking into account ecological and economic differences. By studying and comparing different national situations and solutions from a selected number of sites throughout Europe and by determining common features and differences, including the socio-economic settings and requirements, an integrated toolbox that can be applied on both a European and a regional scale will be made available.

Project Partners	
Project Coordinator	Wageningen IMARES B.V. (Netherlands)
Belgium	Universiteit Gent Vlaams Gewest VlaGew
Bulgaria	Institute of Oceanology, Bulgarian Academy of Sciences
Denmark	Technical University of Denmark
Germany	Senckenbergische Naturforschende Gesellschaft
Greece	Hellenic Center for Marine Research (HCMR)
Ireland	University College Cork (CMRC)
Italy	Consiglio Nazionale Delle Recherché
Malta	Ministry for Rural Affairs and the Environment
Netherlands	Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek TNO Stichting Deltares Deltares Wageningen IMARES
Norway	Norsk Regnesentral Stiftelse Norsk Institutt for Vannforskning Havforskningsinstituttet IMR
Spain	Fundacion AZTI- AZTI Fundazioa
United Kingdom	University College London Centre for Environment, Fisheries and Aquaculture Science CEFAS Heriot-Watt University

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MIDTAL - Microarrays for the detection of toxic algae

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 6: Environment (including Climate Change)
Funding Scheme: Small to medium-scale collaborative project
Project Duration: 48 months (2008-2012)
Total Project Value: €4.3m
EU Grant-Aid: €2.2m
Funding to Ireland: €248,300
Website: www.midtal.com

Project Description

Microalgae in marine and brackish waters of Europe regularly cause "harmful effects", considered from the human perspective, in that they threaten public health and cause economic damage to fisheries and tourism. Cyanobacteria cause similar problems in freshwaters. These episodes encompass a broad range of phenomena collectively referred to as «harmful algal blooms» (HABs). They include discoloration of waters by mass occurrences of microalgae (true algal blooms that may or may not be «harmful») to toxin-producing species that may be harmful even in low cell concentrations. A broad classification of HAB distinguishes three groups of toxic organisms. For adequate management of these phenomena, monitoring of microalgae is required. However, the effectiveness of monitoring programmes is limited by the fact that it is time consuming and morphology as determined by light microscopy may be insufficient to give definitive species and toxin attribution. Once cell numbers reach a threshold level, shellfish are selected for toxin analysis by the mouse bioassay. The mouse bioassay is continued on a daily basis until no more toxin is detected. Molecular and biochemical methods are now available that offer rapid means of both species and toxin detection.

In this project we will target rapid species identification using rRNA genes as the target. We include antibodies to specific toxins because even when cell numbers are very low, the toxins can be present and can be accumulated in the shellfish. Microarrays are the state of the art technology in molecular biology for the processing of bulk samples for detection of target RNA/DNA sequences.

The purpose of MIDTAL is to support the common fisheries policy to aid the national monitoring agencies by providing new rapid tools for the identification of toxic algae and their toxins so that they can comply with ECC Directive 91/1491/CEE that can be converted to cell numbers and reduce the need for the mouse bioassay.

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Project Partners	
Project Coordinator	Marine Biological Association (UK)
Ireland	The Martin Ryan Institute, National University of Ireland, Galway (NUIG)
Italy	Stazione Zoologica Anton Dohrn
Norway	University of Oslo
Spain	Instituto Español de Oceanografía Instituto Tecnolóxico para o Control do Medio Mariño de Galicia
Sweden	University of Kalmar
United Kingdom	University of Westminster Queens University Belfast

ODEMM - Options for delivering ecosystem-based marine management

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 6: Environment (including Climate Change)
Funding Scheme: Large-scale integrated project
Project Duration: 48 months (2010-2014)
Total Project Value: €8,889,821
EU Grant-Aid: €6,997,694
Funding to Ireland: €519,435
Website: http://www.liv.ac.uk/odemm/

Project Description

The overall aim of the ODEMM project is to develop a set of fully-costed ecosystem management options that would deliver the objectives of the Marine Strategy Framework Directive (MSFD), the Habitats Directive (HD), the European Commission Blue Book and the Guidelines for the Integrated Approach to Maritime Policy. The key objective is to produce scientifically-based operational procedures that allow for a step by step transition from the current fragmented system to fully integrated management.

Major steps forward in methodology and the knowledge base related to sustainable management and regional governance of the European marine environment will be made in this project. These will be published in journal articles, and through a series of technical reports or electronic newsletters and briefings.

In addition to this a number of key results or expected outputs are listed below:

Technical report of the 'Current State of Knowledge on the Sustainability of European Seas';

1. Web-based model of cost-benefit appraisal across the four study regions;
2. An accessible web-based guide to the toolkit for marine management scenario evaluations;
3. A costed implementation plan documented in the report 'Ecosystem-Based Marine Management – A Practical Implementation Plan: Getting There from Where We Are Now';
4. An ODEMM regional roadshow disseminating the major outputs from the project – the implementation plan and evaluation toolkit.

The Irish partner, Marine Law & Ocean Policy Research Services Ltd, will undertake a comprehensive review of the law and policy constraints and various options for implementing the ecosystem-approach in the European regional seas.

Project Partners	
Project Coordinator	University of Liverpool (UK)
Bulgaria	Institute of Oceanology, Bulgarian Academy of Sciences (BAS)
Denmark	Innovative Fisheries Management (IFM-AAU)
Finland	Finnish Environment Institute (SYKE)
Greece	Hellenic Centre for Marine Research (HCMR) University of Thessaly (UT)
Ireland	Marine Law and Ocean Policy Research Services Ltd (MLOPRS)
Israel	National Institute of Oceanography- Israel Oceanographic & Limnological Research (NIO-IOLR) Dept. of Zoology, Tel Aviv University
Poland	Sea Fisheries Institute (SFI)
Romania	National Institute for Marine Research and Development (NIMRD)
The Netherlands	Wageningen Institute for Marine Resources & Ecosystem Studies (IMARES). Wageningen University (WU)
Turkey	Institute of Marine Sciences- Middle East Technical University (IMS-METU)
Ukraine	Institute of Biology of Southern Seas (IBSS)
United Kingdom	Scottish Agricultural College (SAC) Centre for Environment, Fisheries and Aquaculture Sciences (CEFAS)

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SALSEA-MERGE - Advancing understanding of Atlantic salmon at Sea: Merging genetics and ecology to resolve stock-specific migration and distribution patterns

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 6: Environment (including Climate Change)
Funding Scheme: Small to medium-scale collaborative project
Project Duration: 36 months (2008-2011)
Total Project Value: €5.6m
EU Grant-Aid: €3.5m
Funding to Ireland: €767,753
Website: www.nasco.int/sas/salseamerge.htm

Project Description

SALSEA-Merge is an ambitious, three year, €5.6 million scientific project to investigate the migration and distribution of salmon in the North-East Atlantic. The project is supported by the European Commission under the FP7 Programme. Funding is also being provided by the partner organisations, the TOTAL Foundation and the Atlantic Salmon Trust. SALSEA-Merge was officially launched on the 16 May 2008 in Killybegs, Ireland.

SALSEA-Merge will deliver innovation in the areas of: genetic stock identification techniques; new genetic marker development; fine scale estimates of growth on a weekly and monthly basis; the use of novel high seas pelagic trawling technology; individual stock-linked estimates of food and feeding patterns; and novel stock specific migration and distribution models.

By merging genetic and ecological investigations, to advance understanding of stock specific migration and distribution patterns and overall ecology of the marine life of Atlantic salmon and gain an insight into the factors resulting in recent increases in marine mortality

SALSEA-Merge forms part of a wider SALSEA programme involving partners from the US and Canada (www.salmonatsea.com).

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Project Partners	
Project Coordinator	Institute of Marine Research (Norway)
Denmark	Danish Institute for Fisheries Research (DIFRES)
Faroe Islands	Faroese Fisheries Laboratory (FFL)
Finland	University of Turku (UT) Finnish Game and Fisheries Research Institute (FGFRI)
France	GENINDEXE (GENI) Conservatoire National du Saumon Sauvage (CNSS)
Iceland	Institute of Freshwater Fisheries (IFL)
Ireland	Marine Institute University College Cork (ZEPS)
Norway	Norwegian Institute for Nature Research (NINA)
Spain	University of Oviedo (UO)
UK	University of Exeter (UE) Queen's University Belfast (QUB) University of Wales, Swansea (UWS) International Atlantic Salmon Research Board (IASRB)

SEAS-ERA - Towards integrated European marine research strategy and programmes

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 6: Environment (including Climate Change)
Funding Scheme: ERA-NET/Integrating Activities
Project Duration: 36 months (2010-2013)
Total Project Value: €1,999,934
EU Grant-Aid: €1,999,934
Funding to Ireland: Re-imbursement of T&S
Website: www.seas-era.eu

Project Description

The SEAS-ERA project will establish a European Network of Marine Research Funding Organisations with a view to increased co-operation and the consolidation of the European Research Area (ERA). SEAS-ERA consists of 21 partners and two third parties from 18 Member and Associated Member States located along the European seaboard in the Atlantic, Mediterranean and Black Sea. Co-operation with Baltic States is ensured via co-operation with the BONUS (Baltic Sea Science Network).

Co-operation will be organised on a vertical or Regional (basin) scale (e.g. Atlantic, Mediterranean, Black Sea and Baltic Sea) with each region deciding its own priorities. A number of horizontal initiatives are also envisaged: preparation of regional Strategic Research Agendas (SRA); Common Programmes and Joint Calls; Improved Infrastructures; Capacity Building and Dissemination.

The Marine Institute (Ireland) is leading the work package preparing a Strategic Research Agenda for the North Atlantic (including co-operation with the USA and Canada).

SEAS-ERA builds on the experience of the previous FP6 MarinERA project (www.marinera.net) which involved 16 partners from 13 countries and which organized a joint €5million call for proposals.

Project Partners	
Project Coordinator	Ministry for Science and Innovation (Spain)
Belgium	Belgian Federal Public Planning Service (Science Policy) BELSPO
Bulgaria	Ministry of Education, Youth and Science.
France	French National Agency of Research (ANR), French Research Institute for the Exploitation of the Sea (IFREMER), Marine Board-ESF (Ostend/Strasbourg)
Georgia	Shota Rustaveli National Science Foundation
Germany	Julich Research Centre
Greece	General Secretariat for Research and Technology (GSRT)
Iceland	Icelandic Centre for Research (RANNIS)
Ireland	Marine Institute
Italy	Ministry of Education, University and Research
Malta	Malta Council for Science and Technology (MCST)
Netherlands	Netherlands Organisation for Scientific Research (NWO)
Norway	Research Council of Norway (RCN)
Portugal	Portuguese Foundation for Science and Technology (FCT)
Romania	National Centre for Programme Management (NCPM)
Turkey	Scientific and Technological Research Council of Turkey (TUBITAK)
Ukraine	Kyiv State Centre for Scientific, Technical and Economic Information
United Kingdom	Department of Environment, Food and Rural Affairs (DEFRA) Natural Environmental Research Council (NERC)
Third Parties	Consiglio Nazionale delle Ricerche European Centre for Information on Marine Science and Technology

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WISER - Water bodies in Europe: Integrative Systems to assess Ecological Status and Recovery

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 6: Environment (including Climate Change)
Funding Scheme: Concerted and Support Actions (Supporting)
Project Duration: 36 months (2009-2012)
Total Project Value: €9,020,000
EU Grant-Aid: €6,980,000
Funding to Ireland: €108,000
Website: www.wiser.eu

Project Description

WISER will support the implementation of the Water Framework Directive (WFD) by developing tools for the integrated assessment of the ecological status of European surface waters. The project will analyse existing data from more than 90 databases compiled in previous and ongoing projects, covering all water categories, organism groups and environmental stressor types. Field-sampling campaigns will supplement the data on lakes and coastal systems. The data will be used to test and complement existing assessment schemes with a focus on uncertainty.

Biological recovery processes after release from hydromorphological and eutrophication will be analysed. Large-scale data will help to identify linkages between pressure variables and organism's responses. Selected case studies, using a variety of modeling techniques, will address pressure-response relationships and evaluate the efficacy of restoration. WISER will provide guidance for the next steps of the intercalibration exercise by comparing different intercalibration approaches.

The Irish partner, The Aquatic Ecology Group, Trinity College Dublin, will investigate the impacts of physical modifications on inshore lake invertebrate communities across nine study lakes in Ireland and link this work with similar studies following an agreed design in Germany, Sweden, Italy and U.K. Other partners will contribute to the work package on common metrics for transitional and coastal waters.

Project Partners	
Project Coordinator	University of Duisburg-Essen (Germany)
Austria	University of Natural Resources and Life Sciences, Vienna
Belgium	Commission of the European Communities- JRC
Bulgaria	Institute of Oceanology- Bulgarian Academy of Sciences
Denmark	Aarhus University (AU)
Estonia	Estonian University of Life Sciences (EMU)
Finland	Finnish Environment Institute (SYKE)
France	French Research Institute for Agricultural and Environmental Engineering (CEMAGREF)
Germany	Leibniz-Institute of Freshwater Ecology and Inland Fisheries (Berlin)
Ireland	Trinity College Dublin (TCD)
Italy	University of Salento (USALENTO), Institute for Ecosystem Studies (CNR-ISE), La Sapienza - University of Rome (UNIROMA1)
Netherlands	Deltares, ALTERRA Green World Research
Norway	Norwegian Institute for Water Research (NIVA)
Poland	Institute of Environmental Protection (IEP)
Portugal	University of Coimbra, Institute of Marine Research (IMAR)
Spain	AZTI- Tecnalia Foundation Spanish National Research Council (CSIC)
Sweden	Swedish University of Agricultural Sciences (SLU)
United Kingdom	University of Hull (UHULL), National Environment Research Council (NERC), Bournemouth University, University College London (UCL)

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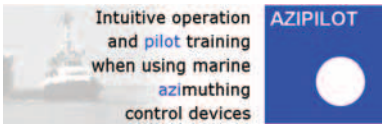
AZIPILOT - Intuitive operation and pilot training when using marine azimuthing control devices

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 7: Transport
Funding Scheme: Concerted and Support Actions (Supporting)
Project Duration: 36 months (2008-2011)
Total Project Value: €1.5m
EU Grant-Aid: €1.5m
Funding to Ireland: €88,558
Website: www.transas.com



Project Description

The aim of AZIPILOT is to improve, by policy and design, the operational safety and security of ships equipped with 'azimuthing' control devices such as pod-drives. This aim will be achieved by more closely aligning the man-machine interfaces of azimuthing equipment, with the actual training of maritime pilots and crews in its use. AZIPILOT brings together the key industry sectors responsible for the design and testing of such equipment, e.g. those involved in simulation and training and the pilots and crews that actually operate azimuthing equipped ships. The project provides a forum for cross-disciplinary discussion between the key industry sectors specifically:

- Specialists in hydrodynamic modelling and testing (both theoretical and experimental) and experts in the field of azimuthing control devices.
- Designers and Manufacturers of marine software, hardware and the physical models that are used for training marine pilots and crews to use azimuthing equipment. This group encapsulates designers, human factors specialists, manufacturers of automation and control systems, joystick systems, and graphical user interfaces.
- Maritime training facilities as users of simulation tools to train pilots and crews, and who employ specialists in the theory and practice of human factors (physical & behavioural), and experts in the training of bridge-crews and pilots.
- Operational practice professionals including maritime pilots, ship operators & managers, pilot associations and end-users, and Maritime Authorities, Regulators and Policy Makers.

Project Partners	
Project Coordinator	University of Newcastle-Upon-Tyne (UK)
Denmark	FORCE Technology
France	METTLE SARL SOGREAH Consultants – Port Revel
Germany	Development Centre for Ship Technology and Transport Systems
Ireland	Transas Marine Ltd.
Italy	Consorzio Armatori per la Ricerca SRL
Netherlands	STC Group
Poland	Centrum Techniki Okretowej Spolka Akcyjna Foundation for Safety of Navigation and Environment Protection
Sweden	Brostöm Ship Management AB SSPA Sweden AB
United Kingdom	BMT SeaTech Ltd South Tyneside College Newcastle University, School of Marine Science & Technology

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E-FREIGHT - European e-freight capabilities for co-modal transport

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 7: Transport
Funding Scheme: Large-scale integrated project
Project Duration: 42 months (2010-2013)
Total Project Value: €12.6m
EU Grant-Aid: €8.4m
Funding to Ireland: €545,288
Website: www.efreightproject.eu

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Project Description

The E-Freight project will facilitate the use of different transport modes on their own and in combination to obtain an optimal and sustainable utilisation of European resources.

1. Transport users (shippers, freight forwarders, etc) will be able to identify and use direct or combined transport services most suited for their purpose. We need open freight transport e-market places. This is dependent on transport service providers publishing their services on the internet in a manner that can readily be used by independent web based transport management systems.
2. Transport users will be able to achieve efficient use of the different transport modes on their own and in combination (co-modality). Stakeholders need improved means to strategically manage networks and to plan and control shipments. For this, the e-Freight project will provide transport chain management solutions assisting transport stakeholders to establish common end-to-end transportation processes incorporating regulations compliance and 'intelligent' monitoring and control.
3. A prerequisite for the development of a European network of integrated transport chains, linking road, rail and waterborne resources in an optimum way, is the simplification and harmonisation of regulatory requirements across modes and EU States. For this the project will investigate solutions for the Single Transport Document that can be generated in the transport planning process and communicated to all involved parties regardless of mode.
4. Further Next Generation Single Windows will be developed for cargo and traffic monitoring irrespectively of mode and integration with SafeSeaNet (SSN) and e-Customs to support cooperation between administrations in security, safety and environmental risk management.

Project Partners	
Project Coordinator	BMT Group Ltd, UK
Austria	Universitaet Innsbruck, Österreichische Wasserstraßen-Gesellschaft
Cyprus	EBOS Technologies Ltd
Finland	Valtion teknillinen tutkimuskeskus
Germany	Institut fur Seeverkehrswirtschaft und Logistik, PTV Panung Transport Verkehr AG, Allround Container Service Hemut Frank GmbH
Greece	Hellenic Institute of Transport, K-NET S.A., University of the Aegean, TREDIT Transeuropean Consultants for Transport, development and Information, Technology S.A.
Hungary	Budapest University of Technology and Economics
Ireland	Nautical Enterprise Centre Ltd., Port of Cork
Latvia	Maritime Administration of Latvia
Netherlands	PortBase, Jan der Rijk, Mobycon
Norway	Marlo A.S., Norsk Marinteknisk Forskningsinstitutt A.S.
Portugal	FordesiConsultoria e Inovacao S.A., Servico Portugues de Contentores
Spain	Port Authority of Valencia
Sweden	STENA, Schenker, DSV A.S.
United Kingdom	INLECOM Systems LTD, University of Newcastle, MJC2 Ltd

PERSEUS - Protection of European seas and borders through the intelligent use of surveillance

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 7: Transport
Funding Scheme: ?????????
Project Duration: 36 months (2010-2013)
Total Project Value: €27.8m
EU Grant-Aid: €27.8m
Funding to Ireland: €766,680
Website: http://www.perseus-fp7.eu/

Project Description

PERSEUS contributes to Europe's efforts to combat illegal migration and goods smuggling by proposing a large scale demonstration of EU Maritime surveillance Systems of Systems, integrating the existing national systems and platforms, enhancing them with innovative capabilities and moving beyond EUROSUR's 2013 expectations, addressing key challenges:

- Supporting the network created by NCCs, Frontex and EMSA through increased capabilities including transnational exchange of useful and available information, and associated procedures and mechanisms thereby creating the common information sharing environment,
- Generation of a common situational picture,
- Improved detection and identification of non collaborative/suspicious small boats and low flying aircraft,
- Enhanced and increasingly automated detection of abnormal vessel behavior, identification of threats and tracking of reporting and non-reporting vessels.

PERSEUS articulates this demonstration through five exercises grouped in two campaigns, implementing missions of drug trafficking and illegal migration control and delivering surveillance continuity from coastal areas to high seas. This project delivers a comprehensive set of validated and demonstrated recommendations and proposes standards. PERSEUS has assembled major users and providers, ensuring privilege access to existing surveillance systems and assets for an optimised coverage of the area of interest. These users will define, assess and validate the alignment of PERSEUS's recommendations to their needs. It also includes an evolution mechanism to enlarge the user base and integrate emerging technologies during its lifetime. PERSEUS will augment the effectiveness of operational capabilities of the existing systems - a real-life, credible, relevant and coordinated contribution to the establishment of an integrated European-wide maritime border control system.

Project Partners	
Project Coordinator	Indra Sistemas, Madrid (Spain)
Finland	Ajeco Oy, Helsinki, Laurea University of Applied Sciences
France	EADS Defence and Security Systems, Paris, DCN, Paris , Ministry of Interior, Overseas Territories and Local Authorities. Intuilab, Toulouse, Sofresud, La Seyne
Greece	National Centre for Scientific Research- Demokritos, Athens, Satways Ltd, Halandri Attiki, Hellenic Ministry of Defence, Ministry of Citizens Protection- Hellenic Coast Guard
Ireland	Skytek Ltd, Dublin, Cork Institute of Technology (CIT)
Italy	Engineering Ingegneria Informatica, Rome, NATO Undersea Research Centre
Luxembourg	SES ASTRA TechCom, Betzdorf, LuxSpace, Betzdorf
Norway	International Peace Research Institute, Oslo
Portugal	INESC Innovation- Institute of New Technologies, Lisbon , Portuguese Air Force
Spain	Systems Engineering for Defence of Spain (ISDEFE), Madrid, EADS CASA, Madrid, , Siemens, Spanish Civil Guard, Meteosim SL, Barcelona, Boeing Research & Technology Europe
Sweden	Saab Ltd.
Switzerland	Data Fusion Research Centre (DFRC AG)

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PROPS - Promotional Platform for Short Sea Shipping and Intermodality

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 7: Transport
Funding Scheme: Small to medium-scale collaborative project
Project Duration: 36 months (2008-2011)
Total Project Value: €2.5m
EU Grant-Aid: €2.5m
Funding to Ireland: €320,078
Website: http://www.props-sss.eu/

Project Description

The PROPS Coordination Action builds on previous EU and national activities undertaken to promote and develop short sea shipping individually and as part of multi modal logistic chains. The goal is increased use of short sea shipping, leading to modal shift from long-haul road freight to sea supporting the sustainable development of European transport.

PROPS aims at working closely with the Short Sea Promotion Centres (SPCs) to develop practical tools to assist with their promotional activities and with extending their operations to encompass inter-modal and co-modal transport.

PROPS will introduce an effective methodology to help intermodal stakeholders achieve the quality of services that end-users require and to confidently market these services throughout Europe. The elements comprising the methodology are:

- A set of Strategic Supports addressing competitive, operational and marketing strategies to convince shippers to shift to SSS services and to provide persuasive material that will enable a promotional campaign to improve the image of SSS;
- A set of Tactical Supports that facilitate the implementation of SSS promotion strategies;
- A set of SPC-specific Supports aimed at increased efficiency of SPCs, focusing on processes for collaboration between SPCs and managing performance and risk indicators.

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Project Partners	
Project Coordinator	Alliance of Maritime Regional Interest in Europe (AMRIE)
Bulgaria	Bulgarian Shortsea Promotion Centre
Finland	University of Turku
Germany	Senator für Wirtschaft und Häfen, Bundesland Bremen
Greece	IUniversity of Piraeus Research Centre K-net Consultancies Services, Educational and Commercial Company
Ireland	Nautical Enterprise Centre Ltd. Irish Exporters Association
Italy	ELSAG S.p.A.
Norway	Norsk Marinteknisk Forskningsinstitutt AS
Portugal	TIS.pt, Consultores em Transportes, Invação e Sistemas, SA
Spain	Port Authority of Gijon Compañía Trasmediterránea
United Kingdom	Sea and Water Inklecom Systems Ltd. Bell Pottinger Group

SKEMA - Sustainable knowledge platform for the European maritime and logistics industry

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 7: Transport
Funding Scheme: Co-ordination and Support Action
Project Duration: 36 months (2008-2011)
Total Project Value: €2.3m
EU Grant-Aid: €2.3m
Funding to Ireland: €401,042
Website: http://www.skematransport.eu/

Project Description

SKEMA is a three year project funded by the European Commission – DG TREN (Directorate General for Energy and Transport) under the 7th Framework Programme. It aims to establish a Sustainable Knowledge Platform for the use of stakeholders in the Maritime Transport & Logistics industry.

The SKEMA Knowledge Platform will contain a Knowledge Base that will be populated by project studies and outputs from workshops and case studies addressing key challenges for the European maritime transport and logistics industry. The studies will be constructed to facilitate improved usability and accessibility of valuable results from previous projects, studies & publications.

SKEMA will:

- Facilitate the exchange of information amongst stakeholders in the European maritime transport and logistics industry, raise awareness of relevant research, provide overview and detailed information on current technologies and best practices at European, regional and national levels;
- Assist in the recognition of obstacles that hinder the implementation of European policies and in proposing and assessing solutions;
- Provide base material that will help in the formulation of advice on various policy initiatives, such as legislation, (including simplification), standardisation, research, networking and co-operation between administrations.

Project Partners	
Project Coordinator	Athens University of Economics and Business Research Centre (Greece)
Cyprus	EBOS Technologies Ltd.
Finland	Valtion teknillinen tutkimiskesus
Ireland	Nautical Enterprise Centre Ltd. Irish Exporters Association (IEA) Dublin Port Company
Latvia	Maritime Administration of Latvia
Netherlands	Centre for the Development of Transport and Logistics in Europe
Spain	Portel Servicios telematicos, S.A. Compania Transmediterranea
Sweden	Chalmwea tekniska hoegskola AB Oresund Logistics
United Kingdom	INLECOM Systems Ltd Sea and Water

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SUPPORT - Security Upgrade for Ports

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 9: Security
Funding Scheme: Large-scale integrated project
Project Duration: 36 months (2010-2013)
Total Project Value: €9,920,607
EU Grant-Aid: €9,920,607
Funding to Ireland: €528,440
Website: www.support-project.eu

Project Description

Port security remains of paramount importance for Europe both due to potential threats to passenger life and the potential for crippling economic damage arising from intentional unlawful attacks on port facilities. Challenges arise due to the complexity of operational modalities of sea and hinterland traffic and the lack of efficient organizational and technological interfaces linking ports to border control authorities, the police and other intervention forces, and transport-logistics operators.

Considerable progress with port security has been achieved in recent years primarily associated with the adoption of the International Ship and Port Facility (ISPS) Code. SUPPORT is aimed at building on these achievements by engaging representative stakeholders to guide the development of next generation solutions for upgraded preventative and remedial security capabilities in European ports. The overall benefit will be the secure and efficient operation of European ports enabling uninterrupted flows of cargo and passengers while suppressing illegal immigration and trafficking of drugs, weapons and illicit substances all in line with the efforts of FRONTEX and EU member states.

SUPPORT will deliver public formal specifications and open standard based tools that will aid security upgrade in EU ports and will be complementary to and usable by other EU projects and initiatives in this area. Emphasis will be given to bring together advances from research on security with results from the main EU projects in maritime and intermodal transport, specifically those concerned with security and interoperability issues. Thus, SUPPORT will address 'total' port security upgrade solutions encompassing legal, organizational, technology and human factors perspectives. These solutions should provide substantial improvements in the performance, reliability, speed and cost of European port security which will be demonstrated during the course of the project.

Project Partners	
Project Coordinator	BMT Group Ltd. (United Kingdom)
Austria	University of Innsbruck
Belgium	EcoPorts
Cyprus	eBos Technologies Ltd.
Finland	Governmental Technical Research Centre of Finland (VTT) Cargotec Port Security
France	National Institute for Research in Computer Science and Control
Greece	Marac Electronics, S.A. Piraeus Port Authority
Ireland	Nautical Enterprise Centre Ltd.
Latvia	Maritime Administration of Latvia
Norway	Marlo A.S. Norwegian Marine Technology Research Institute
Spain	Valencia Port
Sweden	Defence Research Agency, Securitas Sweden, Stena Line Scandinavia
The Netherlands	Port of Amsterdam
United Kingdom	INLECOM Systems Ltd.

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ASIMUTH - Applied Simulations and Integrated Modelling for the Understanding of Toxic and Harmful Algal Blooms

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 10: SPACE
Funding Scheme: ????????
Project Duration: 36 months (2010-2013)
Total Project Value: €3,212,533
EU Grant-Aid: €2,499,647
Funding to Ireland: €745,873
Website: www.asimuth.eu

Project Description

Over the past years there has been much discussion of satellites being able to track surface algal blooms. This has resulted in services that purport to be able to produce Harmful Algal Bloom (HAB) nowcasts and forecasts. The main objective of this proposal is the development of forecasting capabilities to warn of impending harmful algal blooms. The steps to achieve this include a series of scientific and technical objectives which will enable the modeling of physical – biological interactions leading to the forecasting of toxin events, fish mortalities or ecological disruption from harmful algal blooms. The project will demonstrate that the physical, chemical and biological drivers, available through the European Earth observation programme GMES (Global Monitoring for Environment and Security) Marine Core Services and ongoing monitoring can be used in a risk analysis / forecasting product to enable more successful mitigation of potential negative impacts. This product will be of great importance to regulators, monitoring bodies, industry and coastal zone managers throughout North West Europe.

Project Partners	
Project Coordinator	Daithi O'Murchu Marine Research Station - DOMMRS (Ireland)
France	French Research Institute for the Exploitation of the Sea (IFREMER) HOCER
Ireland	Marine Institute Nowcasting Ireland Numerics Warehouse
Portugal	Higher Institute of Technology (IST) IPIMAR
Spain	Spanish Institute of Oceanography Starlab
United Kingdom	Scottish Association of Marine Science (SAMS)

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MyOcean - Development and pre-operational validation of upgraded GMES Marine Core Servives and Capacities

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Theme 10: SPACE
Funding Scheme: Large-scale integrating project
Project Duration: 48 months (2009-2013)
Total Project Value: €55m
EU Grant-Aid: €33.8m
Funding to Ireland: €287,600
Website: http://www.myocean.eu.org

Project Description

The MyOcean project brings together a consortium of 60 partners in 28 countries to set up an integrated, pan-European capacity for ocean monitoring and forecasting, using the existing competences and resources at national level. Currently every member state has its own capacities in oceanography, at global or regional scale, but the organisations, the procedures and the operational levels are extremely variable from one country to another.

The Marine Core Service will be operational from March 2009:

- Operational (i.e. regular and systematic) delivery of reference information on the state of the oceans and European regional seas;
- High resolution products with assessed quality and accuracy;
- Open and free for all kind of users and applications (including commercial);
- A unique desk (24/7/365) for all kind of products and requests;
- Secured, simple and fast delivery (viewing, discovering, downloading).

MyOcean is the implementation of the Marine Core Service, one of three GMES (Global Monitoring for Environment and Security) "Fast Track Services". GMES is a joint initiative of the European Commission and the European Space Agency designed to establish a European capacity for the provision and use of operational information for Global Monitoring of Environment and Security. The areas which will directly benefit from the successful implementation of MyOcean are: Maritime Security, Oil Spill combat, Marine Resources management, Climate Change, Seasonal Forecast, Coastal Activities, Ice Survey and Water Quality and Pollution.

TechWorks Marine have been involved in the development of the service desk web portal within the MyOcean project. The service desk is how the MyOcean data users can see what products are available for what regions. This includes some element of visualisation on the fly.

Project Partners	
Project Coordinator	GIP MERCATOR OCEAN (France)
Belgium	Royal Belgian Institute of Natural Sciences - MUMM
Bulgaria	Institute of Oceanology, Bulgarian Academy of Sciences
Canada	Fisheries and Oceans (DFO)
Cyprus	Oceanography Centre, University of Cyprus
Denmark	Danish Meterological Institute Danish National Space Centre (DTU Space) University of Aarhus (NERI) Technical University of Denmark (DTU-DIFRES)
Estonia	Tallina Tehnikaulikool Meresüsteemide Instituut
EU Commission	Joint Research Centre
Finland	Finnish Institute of Marine Research Suomen ymparistokeskus (SYKE)
France	Collecte Localisation Satellites French Research Institute for the Exploitation of the Sea (IFREMER) Météo-France Centre Nationale de la Recherche Scientifique ACRI-ST

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MyOcean - Development and pre-operational validation of upgraded GMES Marine Core Servives and Capacities

Germany	Bundesamt fur Seeschifffahrt und Hydrographie Brockmann Consult IFM-GEOMAR
Greece	Hellenic Centre for Marine Research (HCMR) Institute of Accelerating Systems and Applications (UAT)
Ireland	TechWorks Marine Ltd.
Israel	Israel Oceanographic & Liminological Research
Italy	Instituto Nazionale di Geofisica e Vulcanologia Consiglio Nazionale Delle Ricerche Ente per le Nuove Tecnologie, l'Energia e l'Ambiente Istituto Nazionale di Oceanografia e di Geofisica Sperimentale Ufficio Stato Maggiore Aeronautica Agenzia per la Protezione dell'Ambiente e per i servizi technici Centro Euro-Mediterraneo per I Cambiamenti Climatici
Latvia	University of Latvia
Lithuania	Center of Marine Research
Malta	University of Malta IOI-POU
Morocco	Institut National de Recherche Halieutique
Netherlands	Koninklijk Nederlands Meteorologisch Instituut
Norway	Nansen Environmental and Remote Sensing Centre Meteorologisk institutt Institute of Marine Research Norsk Institutt for Vannforskning
Poland	Maritime Institute Gdansk
Portugal	Empresa de Servicios e Desenvolvimiento de Software (EDISOFT) Instituto Superior Técnico
Romania	National Institute for Marine Research and Development
Russia	Artic and Antarctic Research Institute Scientific Foundation NIERSC
Slovenia	National Institute of Biology MBS
Spain	Puertos del Estado Consejo Superior de Investigaciones Científicas. Starlab Barcelona S.L.
Sweden	Swedish Meteorological and Hydrological Institute
Ukraine	Marine Hydrophysical Institute (NASU)
United Kingdom	Met Office Natural Environment Research Council (NERC) Plymouth Marine Laboratory (PML) University of Reading (URead) HR Wallingford Centre for Environment, Food and Aquaculture Science (CEFAS) University of Plymouth Higher Education The European Centre for Medium-Range Weather Forecasts (ECMWF) British Antarctic Survey

ACCESS - Arctic Climate Change, Economy and Society

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Oceans of Tomorrow
Funding Scheme: Large scale integrated project
Project Duration: 60 months (2010-2015)
Total Project Value: €14,989,966
EU Grant-Aid: €10,998,027
Funding to Ireland: €360,408
Website: http://www.access-eu.org/

ACCESS
Arctic Climate Change
Economy and Society

Project Description

The Arctic is engaged in a deep climatic evolution. This evolution is quiet predictable at short (year) and longer scales (several decades), but it is the decadal intermediate scale that is the most difficult to predict. This is because the natural variability of the system is large and dominant at this scale, and the system is highly non-linear due to positive and negative feedback between sea ice, the ocean and atmosphere. Already today, due to the increase of the GHG concentration in the atmosphere and the amplification of global warming in the Arctic, the impacts of climate change in the region are apparent, e.g. in the reduction in sea ice, in changes in weather patterns and cyclones or in the melting of glaciers and permafrost. It is therefore not surprising that models clearly predict that Arctic sea ice will disappear in summer within 20 or 30 years, yielding new opportunities and risks for human activities in the Arctic.

This climatic evolution is going to have strong impacts on both marine ecosystems and human activities in the Arctic. This in turn has large socio-economic implications for Europe. ACCESS will evaluate climatic impacts in the Arctic on marine transportation (including tourism), fisheries, marine mammals and the extraction of hydrocarbons for the next 20 years; with particular attention to environmental sensitivities and sustainability. These meso-economic issues will be extended to the macro-economic scale in order to highlight trans-sectoral implications and provide an integrated assessment of the socio-economic impact of climate change. An important aspect of ACCESS, given the geostrategic implication of Arctic state changes, will be the consideration of Arctic governance issues, including the framework UNCLOS (United Nations Convention for the Law of the Sea). ACCESS dedicates a full work package to integrate arctic climate changes, socio-economic impacts and Arctic governance issues.

Project Partners	
Project Coordinator	Pierre and Marie Curie University (France)
Finland	Lapin Yliopisto
France	Le Cercle Polaire Association
Germany	Beluga Shipping GMBH, Deutsches Zentrum fuer luft – ind Raumfahry Ev, Fastopt GMBH, Gasellschaft zur Forderung des Energiewirtschaftlichen Instituts an der Universitat zu Koln GGMBH – EWI, Hamburgische Schiffbau-Versuchsanstalt GMBH, Impac Offshore Engineering GMBH Institut fur Weltwirtschaft, Schwarz Joachim Reinhold Franz Alfred Wegener Institute for Polar and Marine Research O.A. Sys – Ocean Atmosphere Systems GMBH
Ireland	Economic and Social Research Institute (ESRI)
Norway	Cicero Senter Klimaforskning Stiftelse, Norwegian Polar Institute, Nofima Marin AS, Meteorologisk Institutt, Sintef Fiskeri Og Havbruk AS, Stiftelsen Sintef
Russia	Arctic and Antarctic Research Institute P.P. Shirshov Institute of Oceanology of Russian Academy of Sciences
Spain	Universitat Politecnica de Catalunya
Sweden	Kungliga Vetenskapsakademien
United Kingdom	Natural Environment Research Council (NERC), The Scottish Association for Marine Science, The University of Cambridge

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VECTORS - Vectors of change in oceans and seas marine life: Impacts on economic sectors

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Oceans of Tomorrow
Funding Scheme: Large scale integrated project
Project Duration: 36 months (2010-2013)
Total Project Value: €16,329,470
EU Grant-Aid: €12,484,835
Funding to Ireland: €224,955
Website: http://www.marine-vectors.eu/

Project Description

VECTORS will focus on causes and consequences of invasive alien species, outbreak forming species, and changes in fish distribution and productivity. New and existing knowledge and insight will be synthesized and integrated to project changes in marine life, ecosystems and economies under future scenarios for adaptation and mitigation in the light of new technologies, fishing strategies and policy needs.

The project will address a complex array of interests comprising areas of concern for marine life, biodiversity, sectoral interests, regional seas, and academic disciplines as well as the interests of stakeholders. VECTORS will ensure that the links and interactions between all these areas of interest are explored, explained, modelled and communicated effectively to the relevant stakeholders.

The VECTORS consortium is extremely experienced and genuinely multidisciplinary. It includes a mixture of natural scientists with knowledge of socio-economic aspects, and social scientists (environmental economists, policy and governance analysts and environmental law specialists). VECTORS is therefore fully equipped to deliver the integrated interdisciplinary research required to achieve its objectives with maximal impact in the arenas of science, policy, management and society.

University College Dublin (UCD) is leading Work Package 3, in which ecologists, sociologists and economists will investigate how invasive non-native species, outbreaks of non-native species and changes in distribution and productivity of fish will impact on ecosystems, ecosystem services and their benefits and values and the associated economic effects.

Project Partners	
Project Coordinator	Plymouth Marine Laboratory (PML) (United Kingdom)
Denmark	Technical University of Denmark, University of Aalborg
Estonia	University of Tartu
France	French Research Institute for the Exploitation of the Sea (IFREMER)
Germany	Johann Heinrich von Thünen-Institute: Federal Research Institute for Rural Areas, Forestry and Fisheries, University of Hamburg, Gollasch Consulting
Greece	Helenic Centre for Marine Research (HCMR)
Ireland	University College Dublin (UCD)
Israel	National Institute of Oceanography: Israel Oceanographic & Limnological Research
Italy	National Interuniversity Consortium for Marine Sciences, Italian National Research Council, University of Pisa, Fondazione Eni Enrico Mattei (FEEM)
Lithuania	University of Klaipedos
Netherlands	Stichting Dienst Landbouwkundig Onderzoek University of Wageningen, Stichting Deltares
Poland	Institute of Oceanology, Polish Academy of Sciences
Spain	Agencia Estatal Consejo Superior de Invertigaciones Cientificas (CSIC)
United Kingdom	The University Court: University of St. Andrews The Department of State for Environment, Food and Rural Affairs (DEFRA) Bangor University, University of Hull

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AQUAEXCEL - Aquaculture Infrastructure for Excellence in European Fish Research

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme: Research Infrastructures
Funding Scheme: Combination of Collaborate projects and Co-ordination and Support Actions (CP-CSA)
Project Duration: 48 months (2011-2015)
Total Project Value: €11.85m
EU Grant-Aid: €9.2m
Funding to Ireland: €224,150
Website: www.aquaexcel.eu

Project Description

AQUAEXCEL will provide the European aquaculture research community with a platform of top class research infrastructures, integrating on European-scale key aquaculture research infrastructures, in order to promote their coordinated use and development. Through collaboration among 17 partners and 23 facilities, AQUAEXCEL offers research infrastructures for both basic and applied research and it will provide the necessary instruments to make better tools available for aquaculture research.

AQUAEXCEL will:

- Link and coordinate key research infrastructures in Europe to create the basis for synergistic research projects;
- Provide research teams with access to a wide range of the state-of-the-art infrastructures covering all important aquaculture species, systems, environments and expertise;
- Increase resource sharing and standardization between partners, notably but not exclusively for fish models and experimental methods developed in-house;
- Stimulate innovation through transfer of knowledge, harmonisation and development of best practices across fields of research, production systems and species;
- Execute joint research and development activities designed to improve the services currently provided by the infrastructures;
- Bridge the gap between the scientific community and the industry through stimulation of problem-based research and enhanced knowledge transfer.

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Project Partners	
Project Coordinator	Institute National de la Recherche Agronomique (INRA) (France)
Belgium	Universiteit Gent (UGent)
Czech Republic	Jihoceska Univerzita V Ceskych Bude Jovicich (VURH)
France	French Research Institute for the Exploitation of the Sea (IFREMER) Transfert S.A. (IT)
Greece	Hellenic Centre for Marine Research (HCMR)
Hungary	Research Institute for Fisheries, Aquaculture and Irrigation (HAKI)
Ireland	AquaTT UETP Ltd.
Netherlands	Wageningen Universiteit (WU) Institute for Marine Resources and Ecosystem Studies (DLO-IMARES)
Norway	Havforskningsinstituttet (IMR), Nofima Marin AS (NOFIMA) Norges Teknisk-naturvitenskapelige Universitet NTNU (NTNU) Sintef Fiskeri og Havbruk AS (SINTEF)
Spain	Agencia Estatal Consejo Superior de Investigaciones Cientificas (CSIC) Universidad de las Palmas de Gran Canaria (ULPGC)
United Kingdom	The University of Stirling (UoS)

CURE - Croatian Underwater Robotics Research Potential (FP7-REGPOT-2008-1)

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme: Research Infrastructures
Funding Scheme: Co-ordination and Support Actions
Project Duration: 36 months (2009-2012)
Total Project Value: €1,074,840
EU Grant-Aid: €959,049
Funding to Ireland: T&S only
Website: http://cure.fer.hr/

Project Description

Developing Croatian Underwater Robotics Research Potential project will enable a giant step forward for the underwater robotics in Croatia as well as in neighbouring countries on the east coast of the Adriatic Sea. Research, including the development of underwater robotics, was neglected due to social and political unrest in the western Balkans as a result of the 1991-1995 war. With the CURE project, S&T capacity for underwater robotics in Croatia will be re-enforced and the LabUST research team will act in such a way to attract to this arena young students/researchers in all neighbouring countries. LabUST will become a focal point for all developments in the sub-sea domain along the east coast of the Adriatic Sea. LabUST will offer a pool of hardware (ROVs, AUV, sonars, etc.) to researchers, enabling them to explore not only the theoretical but also the practical side of R&D work. CURE will enable the opening of new research topics, preparing us for the cooperation with other EU partners of applying for the FP7 projects in the domain of collaborative research - Cooperation specifically: ICT, environment (incl. climate change), security (maritime) and also in the domain of human potential - Marie Curie actions - supporting and mobilization of human and material resources.

Project Partners	
Project Coordinator	Faculty of Electrical Engineering and Computing (UNIZG-FER) Laboratory for Underwater Systems and Technologies (LabUST) University of Zagreb (Croatia)
Croatia	University of Zagreb, Faculty of Science, Division of Biology Croatian Shipbuilding Institute Ltd., Systems & Process Control Dept. Institute for Research & Development of Defense Systems, MoD Republic of Croatia Croatian Restoration Institute, Min. of Culture Republic of Croatia
Ireland	Mobile and Marine Robotics Research Centre, Department of Electronic and Computer Engineering, University of Limerick (UL)
Italy	The National Research Council- Institute of Intelligent Systems for Automation (CNR- ISSIAO) Polytechnic University of Marche- Dept. of Computer Management & Automation Engineering
Portugal	Institute for Systems and Robotics, Dynamical Systems & Ocean Robotics Lab, Lisbon

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EELA-2 - E-Science Grid Facility for Europe and Latin America

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme: Research Infrastructures
Funding Scheme: Infrastructures: Integrating Activities
Project Duration: 24 months (2009-2011)
Total Project Value: €4,593,000
EU Grant-Aid: €2,093,000
Funding to Ireland: €12,000
Website: http://www.eu-eela.eu/

Project Description

EELA-2 aims to build, on the FP6 EELA e-Infrastructure, to establish a high capacity, production-quality, scalable Grid Facility providing round-the-clock, worldwide access to distributed computing, storage and network resources for a wide spectrum of applications from European and Latin American scientific communities.

EELA-2 will provide an empowered Grid Facility with versatile services fulfilling application requirements and ensure the long-term sustainability of the e-Infrastructure beyond the term of the project. The specific EELA-2 objectives are to (1) building a Grid Facility; (2) expand the current EELA e-Infrastructure to consist of more production sites mobilising more computing nodes and more storage space at the start of the project and to further grow storage over the duration of the project; (3) provide, in collaboration with related projects (e.g. EGEE), the full set of Grid services needed by all types of scientific applications; (4) support applications various types (from classical off-line data processing up to control and data acquisition of scientific instruments), selected against well defined criteria (including grid added value, suitability for Grid deployment, outreach/ potential impact); (5) ensure the Grid Facility sustainability, through the already established and new contacts with policy/decision makers, collaborating with RedCLARA and NRENs and supporting the ongoing creation of e-Science Initiatives and/or National Grid Initiatives (NGI); (6) build the support of the e-Infrastructure to provide a complete set of Global Services from a Central Operations Centre and to pave the way for the creation of Regional Operation Centres in Latin America; (7) attract new applications; (8) make available knowledge of the EELA-2 Grid Facility to all potential users, developers, and decision makers through an extensive Training and Dissemination program; (9) create knowledge repositories federated with the EGEE ones.

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Project Partners	
Project Coordinator	Centre for Energy, Environment and Technology (Spain)
Argentina	New Computing Technologies Laboratory Institute- National University of Plata
Chile	REUNA- National Academic Network International Academic Network
Colombia	University of the Andes
Cuba	Centre for Information Management and Energy Deployment
Ecuador	Technical University of Loja
France	HLP Development SA National Institute of Physics and Nuclear Physics
Ireland	University College Cork (CMRC)
Italy	National Institute of Nuclear Physics
Mexico	National Autonomous University of Mexico (UNAM)
Peru	National Service of Meteorology and Hydrology of Peru
Spain	Federal University of Rio De Janerio
Uruguay	Latin American Cooperation of Advanced Networks (CLARA)
Venezuela	University of the Andes

EMSO - European Multidisciplinary Sea Observation

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme: Research Infrastructures
Funding Scheme: Preparatory Phase Project
Project Duration: 48 months (2008-2012)
Total Project Value: €5.4m
EU Grant-Aid: €3.9m
Funding to Ireland: €390,000
Website: http://www.emso-eu.org/

Project Description

Through the EMSO project, twelve deep sea-floor observatories are planned for specific European offshore sites to allow continuous monitoring for environment and security. Seafloor observatories are defined as unmanned systems, at fixed sites, of instruments, sensors, and command modules connected to land, either acoustically, or via a seafloor junction box to a surface buoy or a fibre-optic cable. One of the EMSO seafloor observatories is called Celtnet and is planned for the Porcupine Basin off Ireland.

The basic scientific objective of EMSO is to make possible real-time, long-term monitoring of environmental processes in the geosphere, biosphere and hydrosphere of European seas. Major advances in our understanding of environmental processes require that we identify temporal evolution and cyclic changes and capture episodic events with respect to oceanic circulation, deep-sea processes and ecosystems evolution.

Establishing a network of seafloor observatories will require strong collaboration at European level to overcome national fragmentation. The EMSO observatories will be organised in a unique European management structure and form a key component of GMES (Global Monitoring for Environment and Security) and GEOSS (Global Earth Observation System of Systems).

Project Partners	
Project Coordinator	Istituto Nazionale di Geofisica e Vulcanologia (Italy)
France	French Research Institute for the Exploitation of the Sea (IFREMER)
Germany	German Marine Research Consortium (KDM)
Greece	Hellenic Centre for Marine Research (HCMR)
Ireland	Marine Institute
Netherlands	Royal Netherlands Institute for Sea Research
Norway	University of Tromsö
Portugal	Fundacao para a Ciencia e a Tecnología (FCT)
Spain	Unidad de Tecnologia Marina del Consejo Superior de Investigaciones Cientificas (UTM-CSIC)
Sweden	Göteborg University
Turkey	Istanbul Teknik Universitesi
United Kingdom	National Oceanography Centre, Southampton

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EURO ARGO - Global Ocean Observing Infrastructure

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme: Research Infrastructures
Funding Scheme: ?????
Project Duration: 36 months (2008-2011)
Total Project Value: €4.21m
EU Grant-Aid: €3m
Funding to Ireland: €116,000
Website: www.euro-argo.eu

Project Description

Euro-Argo is a major European component of the world-wide in situ global ocean observing system (GOOS) and, in particular, the global Argo Programme. The Argo objective is to develop a global array of approximately 3000 autonomous Argo profiling floats (spaced 300 km apart, on average) throughout the ice-free areas of the deep ocean. The floats are battery powered, with a design life of between 3 and 5 years. The 3000 float target was reached in 2007 but approximately 800 floats must continue to be deployed globally each year to maintain the target array. Temperature and salinity data collected from surface depth to 2000m are transmitted in real time by satellite to data centres for processing, management, and distribution.

The main objective of the Euro-Argo preparatory phase is to undertake the work needed to ensure that by 2010 Europe will be able to:

- Deploy, maintain and operate an array of 800 floats. This will require Europe to deploy 250 floats per annum worldwide.
- Provide a world-class service to the research (climate) and environment monitoring (e.g. GMES) communities.

This project will consolidate and broaden the present European participation in Argo and will develop further Europe's role in leading global ocean observations and in ocean and climate research. By providing adequate networking and cooperation between member states, it will give an increased visibility to the large contribution made by Europe to Argo and will contribute to the development of European excellence in Argo-related research.

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Project Partners	
Project Coordinator	French Research Institute for the Exploitation of the Sea (IFREMER) (France)
Bulgaria	University of Sofia (USOF)
France	Service Hydrographique et Océanographique de la Marine (SHOM)
Germany	Federal Maritime and Hydrographic Agency (BSH) Konsortium Deutsche Meeresforschung (KDM)
Greece	Hellenic Centre for Marine Research (HCMR)
Ireland	Marine Institute
Italy	Istituto Nazionale di Oceanografia e di Geofisica Sperimentale (OGS)
Netherlands	Royal Netherlands Meteorological Institute (KNMI)
Norway	Institute of Marine Research (IMR)
Poland	Institute of Oceanology Polish Academy of Sciences (IOPAS)
Portugal	Fundacao da Faculdade de Ciencias da Universidade de Lisboa (FFCUL)
Spain	Instituto Español de Oceanografia (IEO)
United Kingdom	Natural Environment Research Council (NERC) Met Office (UKMO)

EUROFLEETS - Towards an Alliance of European Research Fleets

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme: Research Infrastructures
Funding Scheme: ???????
Project Duration: 48 months (2008-2012)
Total Project Value: €9,057,000
EU Grant-Aid: €7.2m
Funding to Ireland: €516,387
Website: http://www.eurofleets.eu/np4/14

Project Description

The quality of the infrastructures available for marine research directly affects European research performance. Marine research infrastructures are, therefore, considered key elements of the European Strategy for Marine Research. A coherent pan-European approach with enhanced partnership in investment, development and usage of fleets, will have a significant impact to better meet the diverse needs of European marine research.

The EUROFLEETS project will bring together European research fleet Managers to enhance their coordination and promote the cost-effective use of their vessels and associated infrastructures. It will support research services for the monitoring and sustainable management of regional seas and the oceans and will facilitate common access for European scientists on the basis of scientific excellence. Specifically, EUROFLEETS aims to:

- Develop a common procurement strategy and build a roadmap for better integration of the European research fleet;
- Reorganise, through an e-platform, the way that the research vessels are operated and enhance their interoperability capacities;
- Utilise the existing European fleets and associated equipment with much greater efficiency in the frame of the European Research Area;
- Promote greener and more sustainable research vessels and underwater vehicles;
- Provide European marine researchers with access to nineteen high performing research vessels from fifteen different countries;
- Foster coordinated and joint development of European fleets, thanks to new interoperable software and underwater vehicle payloads;
- Develop training and education at sea;
- Promote innovative e-access; and
- Participate in European efforts to retain the highest international standing with respect to marine research.

Project Partners	
Project Coordinator	French Research Institute for the Exploitation of the Sea (IFREMER) (France)
Belgium	Royal Belgian Institute of Natural Sciences (Vlaams Instituut voor de Zee) Vlaams Instituut voor de Zee
Bulgaria	Institiute of Oceanology
Estonia	Tallinna Tehnikaulikool
France	Institut Polaire Français Paul Emile Victor (IPEV)
Germany	Alfred-Wegener-Institut Für Polar- und Meeresforschung Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V. Universität Bremen
Greece	Hellenic Centre for Marine Research (HCMR)
Ireland	Marine Institute
Italy	Istituto Nazionale di Oceanografia e di Geofisica Sperimentale Consiglio Nazionale delle Richerche
Netherlands	Wageningen IMARES B.V. Mariene Infomatie Service MARIS BV
Norway	Institute of Marine Research
Poland	Institute of Oceanology of the Polish Academy of Sciences
Portugal	Fundacao para Ciencea e a Tecnologica EurOcean Foundation
Romania	National Institute of Marine Geology and Geo-ecology
Spain	Instituto Español de Oceanografia Consejo Superior de Investigaciones Científicas
Turkey	Orta Dogu Teknik Universitesi Deniz Bilimleri Enstitusu
United Kingdom	Natural Environment Research Council (NERC)

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GEO-SEAS - Pan-European Infrastructure for Management of Marine and Ocean Geological and Geophysical Data

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme: Research Infrastructures
Funding Scheme: Infrastructures: Integrating Activities
Project Duration: 48 months (2009-2013)
Total Project Value: €6,497,326
EU Grant-Aid: €4,976,476
Funding to Ireland: €348,062
Website: http://www.geo-seas.eu/

Project Description

The overall objective of the GEO-SEAS project is to offer a major and significant improvement in the overview and access to marine geological and geophysical data and data-products from national geological surveys and research institutes in Europe by upgrading and interconnecting their present infrastructures.

The GEO-SEAS partnership has taken a strategic decision to adopt the SeaDataNet interoperability principles, architecture and components wherever possible. This approach allows the GEO-SEAS upgrading to gain instant traction and momentum whilst avoiding wasteful duplicative effort. It is envisaged that the SeaDataNet infrastructure will provide a core platform that will be adaptively tuned in order to cater for the specific requirements of the geological and geophysical domains. A range of additional activities for developing and providing new products and services is also undertaken in order to fulfil the diverse needs of end-user communities.

Project Partners	
Project Coordinator	Natural Environment Research Council (NERC) (UK)
Belgium	University of Gent
Bulgaria	Institute of Oceanology
Denmark	Geological Survey of Denmark and Greenland
Estonia	Geological Survey of Estonia
France	French Research institute for Exploitation of the Sea (IFREMER) Bureau of Geological and Mining Research National Centre for Scientific Research (CNRS) Hydrographic and Oceanographic Department of the Navy
Germany	Federal Office of Navigation and Hydrography (BSH)
Greece	Institute of Geology and Mineral Exploration National Observatory Athens
Ireland	University College Cork (CMRC) Geological Survey of Ireland (GSI)
Italy	National Institute of Oceanography and Experimental Geophysics (OGS)
Lithuania	Institute of Geology and Geography
Netherlands	Netherlands Organisation for Applied Scientific Research EU-CONSULT Consultancy in Project Management and Project Coordination
Norway	Geological Survey of Norway
Poland	Polish Geological Institute
Portugal	National Institute of Engineering, Technology and Innovation
Spain	Geological and Mining Institute of Spain University of Barcelona
United Kingdom	Construction Industry Research and Information Association Centre for Environment, Fisheries & Aquaculture Science (CEFAS)

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JERICO - Towards a Joint European Research Infrastructure Network for Coastal Observatories

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme: Research Infrastructures
Funding Scheme: ???????
Project Duration: 36 months (2010-2013)
Total Project Value: €8,600,000 approx.
EU Grant-Aid: €6,500,000
Funding to Ireland: €171,691
Website: http://www.jerico-fp7.eu/

Project Description

Around European coastal seas, a fast increasing number of observing systems has been implemented, in the context of research and monitoring activities in oceanography. Present requirements on these systems include reliable, high-quality and comprehensive observation, automated platforms and sensor systems and autonomy over long time periods. The in-situ data produced, combined with remote sensing and models output, contribute to detect, understand and forecast the crucial processes over extensive areas within the various national/regional marine environments. Coastal observation is an important part of the marine objectives; the JERICO project proposes a Pan European approach on what to contribute to the international and global effort on climate change research (GEOSS) to provide coastal inputs for operational oceanography, and also to answer the needs of the environmental research and societal communities.

Project Partners	
Project Coordinator	French Research Institute for Exploitation of the Sea (IFREMER)
Belgium	Royal Belgian Institute of Natural Sciences, Brussels
Bulgaria	Institute of Oceanography – Bulgarian Academy of Sciences, Varna
Denmark	Danish Meteorological Institute (DMI), Copenhagen
Finland	Finnish Environment Institute, Helsinki
France	French National Centre for Scientific Research, Paris
Germany	GKSS Research Centre, Geesthacht
Greece	Hellenic Centre for Marine ResearcH (HCMR)
Ireland	Marine Institute
Italy	National Institute of Oceanography and Experimental Geophysics, Trieste National Research Council, Rome National Institute of Geophysics and Volcanology, Rome
Malta	University of Malta
Netherlands	Deltares Foundation, Delft
Norway	Norweign Institute for Water Research, Oslo Institute of Marine Research, Bergen
Poland	Institute of Hydraulic Engineering Sciences, Polish Academy of Sciences, Gdansk
Portugal	Hydrographic Institute of Portugal, Lisbon
Spain	The National Research Council (CSIC), Madrid AZTI – Technological Institute for Marine and Food Research Spanish National Ports and Harbours Authority, Madrid
Sweden	Swedish Meteorogical and Hydrological Institute (SMHI), Norrköping
United Kingdom	Natural Environment Research Council (NERC), Department of State for Environment, Food & Rural Affairs (DEFRA), Partners K & S Keeble

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KM3NeT - Preparatory phase for a deep sea facility in the Mediterranean for neutrino astronomy and associated sciences

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme: Research Infrastructures
Funding Scheme: ??????
Project Duration: 36 months (2008-2011)
Total Project Value: €13,070,000
EU Grant-Aid: €5,000,000
Funding to Ireland: €57,962
Website: www.km3net.org

Project Description

KM3NeT is a European deep-sea research infrastructure that will host a neutrino telescope with a volume of at least one cubic kilometre at the bottom of the Mediterranean Sea that will open a new window on the Universe. The kilometre-sized KM3NeT will search for neutrinos from distant astrophysical sources like gamma ray bursts, supernovae or colliding stars and will be a powerful tool in the search for dark matter in the Universe. An array of thousands of optical sensors will detect the faint light in the deep sea from charged particles originating from collisions of the neutrinos and the Earth. This facility will open the era of neutrino astronomy.

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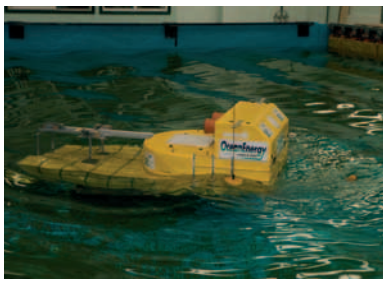
Project Partners	
Project Coordinator	National Institute of Nuclear Physics (Italy)
Cyprus	University of Cyprus, Nikosia
France	Atomic and Alternative Energies Commission University of Haute-Alsace National Centre for Scientific Research
Germany	Friedrich-Alexander-University of Erlangen, Nuremberg
Greece	National and Kapodistrian University of Athens National Observatory of Athens Hellenic Open University National Centre for Scientific Research - Demokritos
Ireland	Dublin Institute for Advanced Studies (DIAS)
Netherlands	Royal Netherlands Institute for Sea Research The Foundation for Fundamental Research on Matter, Utrecht
Romania	National Institute for Laser, Plasma and Radiation Physics
Spain	Polytechnic University of Valencia University of Barcelona
United Kingdom	University of Leeds University of Sheffield The University Court of the University of Aberdeen

MARINET - Marine Research Infrastructure Network for Emerging Energy Technologies

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme: Research Infrastructures
Funding Scheme: Integrating Activities
Project Duration: 24 months (2010-2012)
Total Project Value: €10.5m
EU Grant-Aid: €9.9m
Funding to Ireland: €1,115,533
Website: http://www.fp7-marinet.eu/



Project Description

Offshore Renewable Conversion systems are mostly at the pre-commercial stage of development. They comprise of wave energy and tidal stream convertors as well as offshore wind turbines for electrical generation. These devices require research to be undertaken at a series of scales along the path to commercialization. Each technology type is currently at a different stage of development but each one also needs specific research infrastructures to facilitate and catalyse commercialization. The aim of this proposal is to coordinate research and development at all scales (small models through to prototype scales from laboratory to open sea tests) and to allow access for researchers and developers into facilities which are not available universally in Europe. The linking together of facilities at different scales together with the incorporation of test facilities for components such as power take-off systems, grid integration, moorings and environmental tests will ensure a focusing of activities in this area.

MaRINET brings together an Infrastructure with 42 facilities from 28 partners spread across 11 EU countries and ICPC, Brazil. It also brings together a network of expertise in the Offshore Renewable Energy sector with experience at all scales of offshore technology research and development. MaRINET offers over 600 weeks of access to 200 projects and 800 external users.

Project Partners	
Project Coordinator	University College Cork (HMRC) (Ireland)
Belgium	1-Tech s.p.r.l., Brussels
Brazil	Technological Research Institute of Sao Paolo State
Denmark	Aalborg University , Technical University of Denmark (DTU), Lyngby
France	Ecole Centrale de Nantes (ECN) French Research Institute for Exploitation of the Sea (IFREMER)
Germany	Fraunhofer Society for the Advancement of Applied Research, Gottfried Wilhelm Leibniz University, Hannover, University of Stuggart
Ireland	Sustainable Energy Authority of Ireland (SEAI)
Italy	University of Florence, University of Tuscia The Italian Ship Model Basin (INSEAN), Rome
Netherlands	Tidal Testing Centre (TTC), Energy Research of the Netherlands (ECN)
Norway	Sintef Energy Research, Trondheim Norweigian University of Science and Technology
Portugal	Wave Energy Centre, Lisbon
Spain	Basque Energy Entity (EVE), Robitiker Foundation, Madrid
United Kingdom	New and Renewable Energy Centre Ltd, Northumberland, University of Exeter, European Marine Energy Centre Limited (EMEC), Orkney, University of Strathclyde, University of Edinburgh, Queen's University Belfast, University of Plymouth

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PESI - A Pan-European Species Directives Infrastructure

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme: Research Infrastructures
Funding Scheme: ??????
Project Duration: 48 months (2008-2012)
Total Project Value: €4,057,628
EU Grant-Aid: €2,674,655
Funding to Ireland: €57,962
Website: www.eu-nomen.eu/pesi

Project Description

The PESI project, involving 40 partner organisations from 26 countries, provides standardised and authoritative taxonomic information by integrating and securing Europe's taxonomically authoritative species name registers and nomenclators (name databases) that underpin the management of biodiversity in Europe. PESI contributes to both terrestrial and marine species taxonomy and nomenclature.

PESI will define and coordinate strategies to enhance the quality and reliability of European biodiversity information by integrating the infrastructural components of four major community networks on taxonomic indexing into a joint work programme. This will result in functional knowledge networks of taxonomic experts and regional focal points, which will collaborate on the establishment of standardised and authoritative taxonomic (meta-) data. In addition, PESI will coordinate the integration and synchronisation of the European taxonomic information systems into a joint e-infrastructure and the set up of a common user-interface disseminating pan-European checklists and associated user-services results.

The organisation of national and regional focal point networks will assure the efficient access to local expertise, but is also important for the promotion of taxonomic standards throughout Europe, for instance to liaise with national governmental bodies on the implementation of European biodiversity legislations.

PESI will start with the geographic expansion of the European expertise networks to eventually cover the entire Palaearctic biogeographic region. PESI supports international efforts on the development of a 'Global Names Architecture' by building a common intelligent name-matching device in consultation with the principal initiatives (GBIF, TDWG, EoL, SpeciesBase). PESI contributes to the development of a unified cross-reference system and provides high quality taxonomic standards. PESI will further involve the Europe-based nomenclatural services and link the planned joint European taxonomic e-infrastructures middle-layer to the global e-gateway.

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Project Partners	
Project Coordinator	University of Amsterdam (The Netherlands)
Belgium	Flanders Marine Institute
Bulgaria	National Museum of Natural History
Denmark	University of Copenhagen: Zoological Museum
Finland	University of Helsinki: Finnish Museum of Natural History
France	Museum of Natural History University of Science and Technology, Lille
Georgia	Ilia Chavchavadze State University
Germany	Free University of Berlin
Greece	Hellenic Centre for Marine Research (HCMR) National and Kapodistrian University of Athens
Israel	Israel Oceanographic and Liminological Research Ltd.
Ireland	Ecological Consultancy Services Ltd. National University of Ireland, Galway (NUIG) Society for the Management of European Biodiversity Data Ltd.

PESI - A Pan-European Species Directives Infrastructure

Italy	The Fauna of Italy: Scientific Committee University of Palermo
Latvia	University of Latvia
Lithuania	Institute of Ecology, Vilinus University
Netherlands	Naturalis: National Museum of Natural History
Norway	Norwegian University of Science and Technology
Poland	Museum and Institute of Zoology: Polish Academy of Sciences Institute of Oceanology: Polish Academy of Sciences
Romania	Mynature Association
Russia	Zoological Institute, Russian Academy of Sciences
Slovakia	Institute of Bitany, Slovak Academy of Sciences Bratislava University
Slovenia	National Institute of Biology
Spain	University of Seville CSIC
Sweden	Swedish Museum of Natural History
Switzerland	Swiss Systematics Society
Turkey	Trakya University
Ukraine	A.O. Kovalevskiy Institute of Biology of Southern Seas State Museum of Natural History, National Academy of Sciences
United Kingdom	CAB International Royal Botanic Gardens International Trust for Zoological Nomenclature Marine Biological Association of the United Kingdom National History Museum

HYFFI - Hydrocolloids as functional food ingredients for gut health

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme
Funding Scheme: Research for SME's
Project Duration: 24 months (2008-2010)
Total Project Value: €1,208,359
EU Grant-Aid: €936,575
Funding to Ireland: €328,323
Website: http://www.seaweedforhealth.org/node/1

Project Description

The overall aim of the HYFFI project is to realize a commercial opportunity to produce low molecular weight polysaccharides (LMWPs) from alginate- and agar-bearing seaweeds for applications in food and health, and wellness products by a group of SMEs. The aim will be addressed by an integrated workplan comprising one management activity, five interlinked RTD Work Packages and a dissemination and exploitation activity.

In the RTD programme, CyberColloids Ltd will produce and characterise eight novel LMWPs from alginate and agar raw materials provided by two SMEs (Industrias Roko S.A. and Hebridean Seaweed). The LMWPs will be screened using batch culture fermentations with human faecal bacteria for probiotic activity (i.e. ability to modulate beneficially the gut microflora) by University of Reading (UREAD). The two most effective agar and alginate LMWPs will be selected and bulk produced by CyberColloids Ltd for validation of probiotic activity in a feeding trial in human volunteers (University of Ulster). The end points to be assessed will be stimulation of beneficial bacteria (bifidogenic effects), increased short chain fatty acid production, beneficial effects on stool formation, and improvements in gut barrier function (assessed by an in vitro method). Additionally, benefits of the LMWPs towards plasma lipid profiles and blood glucose levels will be assessed. Alongside the human study, a detailed investigation of the effects of the selected LMWPs in an in vitro model of the human colon will be conducted by UREAD to provide supporting evidence for beneficial effects on bacterial types and activities in the colon. RO and HS in conjunction with CyberColloids Ltd will implement LMWP technology transfer and scale-up to facilitate production at an industrial scale. Subsequently, another SME (Marigot Ltd) will provide a route to market and in conjunction with Industrias Roko, S.A., Hebridean Seaweed and CyberColloids Ltd will exploit, with respect to the health and wellness sector, the relevant knowledge provided on the efficacy of novel LMWPs from alginate and agar.

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Project Partners	
Project Coordinator	The University of Reading (United Kingdom)
Ireland	Marigot Ltd. CyberColloids Ltd.
Spain	Industrias Roko, S.A.
United Kingdom	Hebridean Seaweed Company Ltd. University of Ulster

MUSSELSALIVE - Development of best practice and new technology for grading, handling, transportation, conditioning and storage of mussels for SME's in the European mussel industry

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme
Funding Scheme: Research for SME's
Project Duration: 2008-
Total Project Value: €2,628,985
EU Grant-Aid: €2,048,353
Funding to Ireland: €206,587
Website: http://www.musselsaliveproject.com/

Project Description

The European mussel industry's profitability levels are currently low at all levels. Non-European mussel suppliers are advancing in the European market with low-cost products, pushing the overall prices for mussel products down. The market price for live mussels has improved recently. This creates a market opportunity for European mussel producers. EU mussel production takes place in peripheral coastal areas. To allow producers benefit from their relatively shorter distance to the European market than non-European competitors, infrastructure, technology and logistics must be improved. A significant cost to the European mussel sector is associated with the waste of mussels due to substandard quality. On average, 20% is wasted in the chain from producer to processer. The waste is mainly related to practices in grading, handling, storage and transportation. The MusselsAlive project seeks to increase the profitability and the competitiveness for the large number of SMEs in the European mussel industry. The aim is to reduce the amount of commodity that is wasted from harvest to market by 35%. This represents a 7 % increase output (20,000 tons) from the mussel production for the EEA live market. This will be achieved by: (1) improve grading technology that reduce the amount of wasted mussels in the grading process by 35%; (2) develop a storage/transportation unit that minimizes handling and reduce the damaged and waste of commodity by 35%; (3) develop a mussel holding recirculation system for conditioning and storage of mussels. The system will reduce the waste of commodity during storage by 35%: (4) identify and prepare best practice protocols for grading process, handling, transportation, conditioning and storage of live mussels. Irish mussel producers are at a disadvantage in that long sea-journeys are required to bring fresh, live product to the main markets on the continent. Collaboration in this research project is intended not only to reduce waste but also improve shelf-life and guarantee quality during transport. The economical benefits from the project are estimated to be an annual €61m increase in market value, of which €18m is added directly to European mussel producers and €6.6m directly to the European mussel processors.

Project Partners	
Project Coordinator	Norwegian Seafood Centre, Bergen (Norway)
France	European Molluscs Producers Association
Ireland	Ireland Farmers' Association (Aquaculture)
Norway	Norwegian Farmer's Association Norwegian Fish Farmers Association Malthe Winje Automation Institute of Technology, Oslo
Portugal	National Institute of Biological Resources, Lisbon
Spain	Pladomin Plastic Components, Santander
United Kingdom	Association of Scottish Shellfish Growers Swansea University

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OYSTERECOVER - Establishing the scientific basis and technical procedures and standards to recover the European flat oyster production

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme
Funding Scheme: Research for SME's
Project Duration: 2008-
Total Project Value: €3,254,491
EU Grant-Aid: €2,555,232
Funding to Ireland: €1,105,789
Website: http://oysterecover.eu/

oysterecover

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Project Description

The European flat oyster (Ostrea edulis), has been part of the human diet for many centuries. High mortality episodes and overfishing decimated the populations of O.edulis in Europe through the first half of the 20th century. Then, two diseases (due to Marteilia refringens and Bonamia ostrea) spread in the early 1970s and 1980s, drastically reducing the production. Despite new management practices, and intensive repletion programmes, the production of O. edulis has remained low since that time. The recovery of European flat oyster production is seen as an important opportunity for the shellfish industry in Europe. Thus this project proposal aims to attain a clear competitive advantage for a number of SME Associations and their members for different reasons: (1) Chance to diversify production (risk management); (2) High market value of the product; (3) Environmental positive effects of fostering aquaculture activities based on native species; (4) Biotechnology provides tools and procedures to oyster industry problems that were not available until recently. Four Shellfish Producer Associations (from three different Member States) and four SMEs, concerned about the above mentioned issues and being aware of recent scientific progress in selective breeding programmes for bonamiosis tolerance, decided to work together with the common general objective of the challenge of establishing the scientific and technical basis, procedures and standards that allow the recovery of the O. edulis production, through development of strategies to tackle the main constraint, i.e. bonamiosis. To successfully achieve this goal those European Research Centres and Universities which mainly have contributed to scientific progress on O. edulis recovery and selective breeding programmes for bonamiosis resistance, will be contracted by the SME Associations and SMEs involved in this OYSTERECOVER proposal to carry out the relevant research.

Project Partners	
Project Coordinator	CETMAR- Sea Technology Centre Foundation (Spain)
Denmark	Danish Shellfish Centre
France	French Research Institute for the Exploitation of the Sea (IFREMER) Sélection Française Conchylicole
Ireland	Clew Bay Marine Forum Ltd. Clew Bay Oyster Cooperative Society Ltd. Atlantic Shellfish Ltd. University College Cork (AFDC)
Netherlands	IMARES, Wageningen Dutch Oyster Association
Spain	MA- Marine Research Centre, Pontevedra University of Santiago De Compostela Confraria De Noia Jose Maria Daporta Leiro E Hijos SL
United Kingdom	The Secretary of State for Environment, Food and Rural Affairs (DEFRA) The Falmouth Oyster Company

SETTLE Bivalve conditioning and settlement – Keys to competitive hatchery production

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme
Funding Scheme: Research for SME's
Project Duration: 2008-
Total Project Value: €1,852,200
EU Grant-Aid: €1,406,400
Funding to Ireland: €193,950
Website: http://settleproject.com/

Project Description

Hatchery production of bivalves during autumn and winter (outside natural spawning season) is a challenge, but necessary to keep market shares and ensure sufficient seed supply to European growers on a year-round basis. The SETTLE project will focus on key events during hatchery production of flat oyster (Ostrea edulis) and great scallop (Pecten maximus) which are species native to Europe. The overall objective is to foster year-round production of spat in hatcheries by controlling gonad development and maximise larval metamorphosis and settlement. Flat oyster and great scallop are both highly valued and sought-after products on the European seafood market, but insufficient numbers of high quality seed severely hamper aquaculture development of this sector. Bivalve hatcheries (SMEs) in Spain, France, Ireland and Norway are looking to increase the availability of spat and will engage RTDs in Spain, France and Norway to solve selected problems related to broodstock conditioning and larval settlement. Successful intensive production of bivalve spat depends on predictable procedures for conditioning of broodstock (manipulation with feed, light and temperature) to induce spawning, breeding period, larval rearing and settlement. To solve the seasonal problems the SETTLE project will identify environmental factors leading to successful off-season broodstock conditioning, reveal effects of conditioning and other biological processes on settlement and optimise existing culture methods and technology. By extending the hatchery production season and obtaining new knowledge and technologies the SMEs will increase the available number of flat oyster and great scallop spat. A quantity and value increase 5-10 times of today's level is anticipated within 5-7 years. This will strengthen the competitive position of the SMEs and increase the shellfish production in Europe significantly.

Project Partners	
Project Coordinator	University of Bergen (Norway)
France	French Research Institute for the Exploitation of the Sea (IFREMER) GRAINOCEAN
Ireland	Cartron Point Shellfish Ltd.
Norway	Institute of Marine Research, Bergen Scalpro AS Arctic Oysters AS
Spain	Spanish Institute of Oceanography University of Santiago de Compostela

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SUDEVAB - Sustainable development of European SME's engaged abalone aquaculture

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme
Funding Scheme: Research for SME's
Project Duration: 24 months (2008-2010)
Total Project Value: €1.25m
EU Grant-Aid: €972,498
Funding to Ireland: €110,000
Website: http://www.sudevab.eu/

Project Description

SUDEVAB brings together SMEs and leading RTD providers from the abalone aquaculture sector in Europe with the aim of developing sustainable abalone aquaculture. Abalone has long been considered a potential candidate for European aquaculture. However, while abalone aquaculture in other parts of the world has surged ahead, European production has been restricted by the lack of reasonably priced juveniles, technological problems, and legislative issues.

The core of the research work of SUDEVAB is aimed at solving the main technical problems encountered by abalone growers in Europe in the areas of; pathology, genetics, nutrition, and sustainable culture technology. However, for a sustainable abalone sector to develop, producers and regulators must also meet challenges in legislation, hygiene, food safety and marketing. These issues are integrated within the research programme to maximise the impact of the project. For the long term benefit of the sector, the project will also establish an abalone producers' organisation that will serve as a network, dissemination point and hub for future collaboration within the sector, allowing trans-national development and marketing support to continue beyond the lifetime of the project.

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Project Partners	
Project Coordinator	CETMAR- Sea Technology Centre Foundation (Spain)
France	France Haliotis S.C.E.A. Centre National de Recherche Scientifique (CNRS) French Research Institute for the Exploitation of the Sea (IFREMER)
Ireland	National University of Ireland, Galway (Martin Ryan Institute,)
Ireland and Channel Islands	Jersey Sea Farms
Spain	Servimar Norte S.L. Instituto Español de Oceanografía (IEO) Grupo de Investigación en Acuicultura (Gran Canaria)
United Kingdom	South-West Abalone Growers Association (SWAGA)
Sub-contractors	
Belgium / France Ireland Germany	Federation of European Aquaculture Producers Tower Aqua Products Ltd Sylter Algenfarm

TEAMSAFETY - The development of an innovative 3D virtual team-training maritime safety simulation platform to meet the latest EU safety requirements for sea and seafarers' emergency response training

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: Capacities Programme
Funding Scheme: Research for SME's
Project Duration: 2008-
Total Project Value: €2,921,627
EU Grant-Aid: €2,266,265
Funding to Ireland: €578,458
Website: www.team-safety.eu

Project Description

The aim of this project is to design a 3D virtual and interactive team-training software platform to serve the seafarers' safety training needs and to meet the EC's recent safety requirements, set up for the various maritime industries. The prototype to be delivered will be a distributed, scalable, collaborative interactive simulation environment that will enable training of seafarers. The proposed system will avoid the simulation paradigm where the trainee selects one of a number of pre-set drill-oriented choices at a predictable decision point. Instead, using an interactive games paradigm, the trainees will be able to practice situation and cue assessment, problem diagnosis, decision making and action coordination, and proactive response to a critical incident. The realistic 3D virtual replica would enable trainees to act, see, issue commands, cooperate and communicate as if they were physically on site. The proposed training platform will increase the proper emergency preparedness of the ship crew and will create a highly increased level of safety consciousness. The system will provide maritime training centres with the opportunity to train more efficiently seafarers from the various maritime sectors, thus enabling various stakeholders, i.e. European Shipowners, to meet the strict legislative requirements adopted by EU in regards to maritime safety e.g. the ISM Code. Developing advanced skills and competences among seafarers in relation to emergency responses will enable them to prevent unsafe situations, and prepare for effective actions when incidents occur. This will not only minimize the possibility of business interruption and loss of property, thus reducing the economic loss, but will also have a massive impact on preserving the European marine environment by reducing oil spills in the sea and most importantly decreasing significantly the chances of sustaining injuries and loss of human life.

Project Partners	
Project Coordinator	Danish Innovation Institute, Lyngby (Denmark)
Bulgaria	Bulgarian Maritime Training Centre
Denmark	Unity Studios
Iceland	International Association for Safety and Survival Training
Ireland	Sea and Shore Safety Ltd.
Portugal	National Institute of Biological Resources, Lisbon
Sweden	World Maritime University (WMU)

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AQUAPHAGE - Network for the development of phage therapy in Aquaculture

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: People Programme
Funding Scheme: International Staff Exchange (IRSFS)
Project Duration: 28 months (2011-2015)
Total Project Value: €358,700
EU Grant-Aid: €358,700
Funding to Ireland: €15,200
Website: Not currently available

Project Description

AQUAPHAGE aims to establish a strong network for the development of phage therapy in aquaculture through a well balanced research staff exchange program. The platform for the implementation of this initiative is a common project focused on the identification and exploitation of phages specific for bacterial pathogens that constitute serious threats for both freshwater and marine aquaculture. The target bacteria are Listonella anguillarum and V. harveyi, pathogens of Mediterranean aquaculture species (European sea bass and gilthead sea bream), Flavobacterium psychrophiluma, serious pathogen of trout and Aeromonas salmonicida, obligate bacterial pathogen of Atlantic salmon. The capacities and synergies of the partners will be exploited towards these goals. Aquaculture facilities owned by the partners can provide the necessary materials for the isolation of a wide variety of phages. Enzyme Biotechnology, Molecular Biology and Genomics will provide strong background information for the most efficient selection of lytic phages. Enhancement of lytic activity using bacterial strains from the collections of the participating institutes will lead to the development of a final product with increased efficacy against these pathogens. Modern bioindicator systems will be used for the assessment of disease treatment impact on the environment. The formation of this research partnership with partners owing expertise and excellence in their field will provide possibilities for inter-disciplinary exchanges and will constitute a technological and scientific platform for further cooperation in the field of Phage Therapy in Aquaculture.

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Project Partners	
Project Coordinator	Hellenic Centre for Marine Research (HCMR) (Greece)
Chile	University of Chile, Santiago
Denmark	Københavns Universitet
Georgia	George Eliava Institute, Tbilisi
Greece	Agricultural University of Athens
Ireland	Trinity College Dublin (TCD)

AIRSEA - Air-sea fluxes of climatically relevant gases in the marine atmospheric boundary layer

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: People Programme
Funding Scheme: Reintegration Grant
Project Duration: 36 months (2009-2012)
Total Project Value: €100,000
EU Grant-Aid: €100,000
Funding to Ireland: €100,000
Website: Not currently available

AIRSEA @NUIG

Project Description

Climate change continues to present one of the most significant challenges facing society. Recent efforts to introduce policy to reduce anthropogenic greenhouse gas (GHG) emissions have been largely unsuccessful, partially due to the fact that scientific policy is running ahead of scientific knowledge.

Little consensus exists as to the processes governing the oceanic sink for GHGs or their variability on seasonal to decadal timescales. Without a substantial maturing and deepening of our knowledge on these complex issues, scientists will be unable to provide the verification techniques of future trends that are now urgently required for policymakers.

The objective of the IRG project was to provide funding to the International Returning Fellow to initiate a research programme into the study of air-sea fluxes. This research was undertaken from an observational perspective, meaning the IRF deployed instruments in the marine atmospheric and oceanic boundary layers to elucidate the processes responsible for the transport of air-sea GHGs.

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Project Partners	
Project Coordinator	National University of Ireland, Galway (NUIG)

MABFUEL - Marine Algae as Biomass for Biofuel

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: People Programme
Funding Scheme: Industry – Academia Partnerships and Pathways (IAPP)
Project Duration: 48 months (2008-2012)
Total Project Value: €1.4m
EU Grant-Aid: €1.4m
Funding to Ireland: €1m
Website: http://www.dommrc.com/project-mabfuel.html

Project Description

The main aim of this project is to investigate the feasibility of using algae (micro and/or macro) as a feedstock for producing bio-fuels in Ireland and Turkey. The yield of oil from algae is estimated to be 7 to 31 times greater than the next best crop (oil of palm) and micro-algae, in particular, have much faster growth-rates than terrestrial crops. As terrestrial contributions are greatly limited by the finite area of land available under any culture method, it is essential that the potential of the marine environment as a source of biomass for bio-fuel production is realised.

The Mabfuel project will review the global state-of-the-art in the extraction of biofuel products from algae with a focus on species, methodologies, yield and culture methods for algal feedstocks. Practical research and technology transfer will focus on developing optimal methods to extract oil from algal biomass and on intensive large-scale culture methods for micro-algal species in indoor and outdoor facilities. The project will also assess environmental, social and economic risks and benefits of the bio-fuel products developed. This will include an economic model for viable, industrial-scale production and identification of knowledge gaps and commercialisation pathways.

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Project Partners	
Project Coordinator	Daithi O'Murchu Marine Research Station DOMMRS (Ireland)
Ireland	Green Biofuels Ireland Ltd Dundalk Institute of Technology (DIT)
Turkey	Gaziantep University Ege University
United Kingdom	Queen's University Belfast Dolphin Sea Vegetables

WAVETRAIN II - Initial training network for wave energy research professionals

Project Details
Funding Programme: 7th Framework Programme (FP7)
Sub-Programme: People Programme
Funding Scheme: Initial Training Network
Project Duration: 48 months (2008-2012)
Total Project Value: €3,580,000
EU Grant-Aid: €3,580,000
Funding to Ireland: €223,197
Website: www.wavetrain2.eu

Project Description

The Wavetrain II project is a multinational Initial Training Network (ITN) funded under the FP7-People programme, in order to face the wide range of challenges that industrial-scale wave energy implementation faces in the near future, focusing on technical issues, from hydrodynamic and PTO (Power Take-Off) design, to instrumentation issues and energy storage and cost reduction show to be critical for successful deployment.

Non-technical "barriers", typically less tangible difficulties related to legal issues (licensing, conflicts of use, EIA procedures, grid connection, regional differences) and the non-sufficient representation of socio-economic benefits of the sector, will be dealt with, as they are seen as a major obstacle for fast implementation on a European scale. The network consists of 13 European partner institutions and 17 associated entities, from research units and device developers to project developers and consultants.

In the predecessor, almost all research fellows where immediately absorbed by industrial players in the field or continued research in the host institution. The work plan for WAVETRAIN II research fellows is specifically directed towards a wide range of challenges that industrial-scale wave energy implementation faces in the present situation, with some bias towards technical issues, from hydrodynamic and PTO (Power-Take-Off) design, to instrumentation issues and energy storage and cost reduction show to be critical for successful deployment.

Project Partners	
Project Coordinator	Wave Energy Centre - Centro de Energia das Ondas (WavEC - Portugal)
Denmark	Aalborg University Spok APS
Ireland	University College Cork (HMRC)
Netherlands	Delft University of Technology
Norway	Norges Teknisk - Naturvitenskapelige (NTNU - Norway)
Portugal	Higher Technical Institute of Lisbon
Spain	Robotiker Foundation
United Kingdom	Wave Dragon Ltd. AWS Ocean Energy Ltd. Queen's University Belfast The University of Edinburgh

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NOTES

EUROPEAN REGIONAL DEVELOPMENT FUND

Project Profiles

Irish organisations are involved in 32 INTERREG-IV marine projects drawing down over €12.9 million in grant-aid.

The European Territorial Co-Operation Programme, better known as INTERREG, is a suite of competitive EU Regional Development funded programmes designed to strengthen economic and social cohesion by fostering balanced development through cross-border, transnational and interregional cooperation. Its main aim is to diminish the influence of national borders in favour of equal economic,social and cultural development of the whole territory of the European Union. There are currently 69 INTERREG-IV programmes of which six are of interest to Ireland.

Marine Institute
Foras na Mara

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EUROPEAN REGIONAL DEVELOPMENT FUND

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3. An Introduction to INTERREG-IV (2007-2013)

3.1 What is INTERREG-IV?

The European Territorial Co-Operation Programme, better known as INTERREG, is a Regional Development funded programme designed to strengthen economic and social cohesion throughout the European Union. It achieves this by fostering balanced development through cross-border, transnational and interregional cooperation. Its main aim is to reduce the influence of national borders in favour of equal economic, social and cultural development of the whole territory of the European Union. While not a research programme per se, projects with a research element may be supported provided they contribute to the overall aims of the Programme or one of the specific Programme's priority areas.

INTERREG-IV is made up of three strands:

Strand A: Cross-border cooperation: Cross-border cooperation between adjacent regions. Strand A of INTERREG-IV includes 52 individual cross-border programmes (e.g. Ireland – Wales) which account for 74% of the INTERREG-IV budget (some €5.6 billion).

Strand B: Transnational cooperation: Strand B is the intermediate level, where generally non-contiguous regions from several different countries cooperate because they experience joint or comparable problems. The 13 transnational cooperation programmes cover larger areas such as the Atlantic Arc, the Baltic Sea, Alpine and Mediterranean regions with an ERDF contribution of €1.8 billion.

Strand C: Interregional cooperation: Interregional cooperation aims to improve the effectiveness of regional development policies and instruments through large-scale information exchange and sharing of experience (networks). This is financially the smallest strand of the three, but the programmes cover all EU Member States. Strand C includes the interregional co-operation programme and 3 networking programmes. Each programme covers all 27 Member States of the EU. They provide a framework for exchanging experience between regional and local bodies in different countries. Strand C has an ERDF contribution of €445 million.

Typical INTERREG-IV priorities include: the promotion of urban, rural and coastal development; developing small and medium-sized enterprises, including those in the tourism sector; developing local employment initiatives; encouraging shared use of human resources and facilities for research and development, education, culture, communication, health and civil protection; measures to improve environmental protection, improving energy efficiency and renewable energy sources; improving transport, information and communication networks and services.

INTERREG is a Community initiative that aims to stimulate interregional cooperation in the European Union. It started in 1989, and is financed under the European Regional Development Fund (ERDF). The current programme is INTERREG-IV, covering the period 2007–2013.

INTERREG-IV has a budget of almost €7.8 billion, up from €4.9 billion in INTERREG III.

There are currently 69 INTERREG-IV programmes of which six are of interest to Ireland.

3.2 Who can participate in INTERREG-IV?:

The beneficiaries of INTERREG funds are usually public authorities, associations and non-profit organisations, such as chambers of commerce, employer and trade organisations, unions or research institutes. Under INTERREG-IV, private firms are only eligible if they apply through a consortium of several firms; in previous programme periods, they were not eligible at all.

INTERREG projects require co-funding to be provided by Member States or the project partners themselves. Grant-aid varies by region and ranges from 75% to 40% of eligible costs.

3.3 How well do Irish researchers compete in INTERREG-IV?:

INTERREG programmes provide an important source of external competitive funding for a range of knowledge and community-based marine projects promoting regional and cross-border co-operation and development.

Over the period 2007-2010, 29 Irish organisations (Annex 1) are participating in 32 INTERREG-IV projects (grant-aid to Irish partners: €12.9 million; total project costs: €85.6 million, EU grant-aid: €58 million). These projects cover a range of co-operative activities including marine resource development, environmental protection, maritime transport, renewable marine energy and marine tourism and leisure (including

EUROPEAN REGIONAL DEVELOPMENT FUND

3. An Introduction to INTERREG-IV (2007-2013)

Programme	Priority Topics	Geographical Coverage
IVA: Ireland-Wales	- Knowledge, Innovation and Skills for Growth - Climate Change and Sustainable Regeneration	East coast Ireland / West coast Wales
IVA: Northern Ireland Scotland – Republic of Ireland border counties	- Co-operation for a prosperous cross-border region; - Co-operation for a sustainable cross-border region.	Northern Ireland, West coast of Scotland, Border regions of the Republic of Ireland
IVB: Atlantic Area	- Transnational entrepreneurial and innovation networks; - Marine & coastal environment; - Accessibility and internal links; - Urban and regional development.	Whole of Ireland and Portugal, west coasts of UK, France and Spain
IVB: North-West Europe	- Innovation; - Environmental Challenges; - Connectivity; - Strong and prosperous communities.	Ireland, UK, the Channel coasts of the Netherlands, Belgium and France
IVB: Northern Peripheral Programme	- Communications; - Sustainable development; - Community development.	West coast of Ireland, Scotland, Norway, Iceland, Sweden and Finland.
IVC: Europe	- Pan-European co-operation	Whole of Europe

Table 3.1.
INTERREG-IV Programmes of direct interest to Ireland.

maritime heritage).

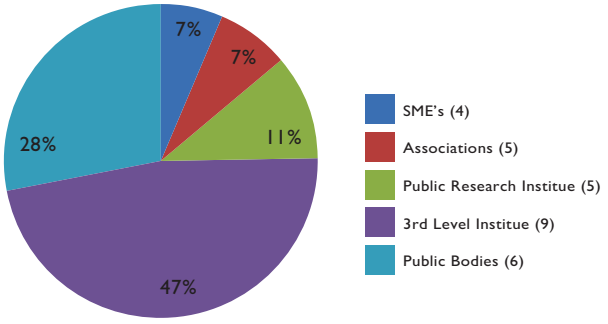

Figure 3.1
Percentage of European funding allocated to Irish SME's (7%), Associations (7%), Public Research Institutes (11%), Third Level Institutes (47%), and Public Bodies (28%) for participation in INTERREG-IV projects. The number of each organization type is shown in parentheses.

Irish organisations lead four of these 32 projects (Table 3.3) and Irish participation includes 9 Third Level Institutions, 5 Public Research Institutions, 6 Public Bodies, 5 Associations and 4 SMEs. Of the €12.9 million allocated to Irish partners in grant-aid, 47% goes to the Third Level Sector and 28% to Public Bodies (Figure 3.1).

The majority of marine projects with Irish participation are funded under the INTERREG-IVB Atlantic Area Programme (Table 3.2.), although the value of individual grants under the Northern Ireland-Scotland-RoI and the Ireland-Wales Programmes are higher (Figure 3.2). Grant-aid is normally in the region of €100k - €300k (Figure 3.3), with three projects receiving over €1 million in grant-aid (i.e. BioMara, Smart Coasts – Smart Communities and Sail West).

3. An Introduction to INTERREG-IV (2007-2013)

Interreg Sub-Programme	No. of Projects	Total Project Value (€)	EU Grant Aid (€)	Funding to Ireland (€)
Northern Periphery (5)	5	4,709,599	2,566,189	643,776
North West Europe (2)	2	13,027,223	6,513,612	518,159
Ireland-Wales (6)	6	13,125,076	10,031,819	3,598,456
Northern Ireland, Scotland - RoI (3)	3	15,278,060	13,618,156	4,117,298
Atlantic Area (15)	15	37,546,666	23,380,618	3,966,738
Europe (1)	1	1,884,204	1,485,644	113,526
Total (32)	**32**	**85,570,828**	**57,596,038**	**12,957,953**

Table 3.2.
Irish participation in INTERREG-IV Programmes (2007-2010).

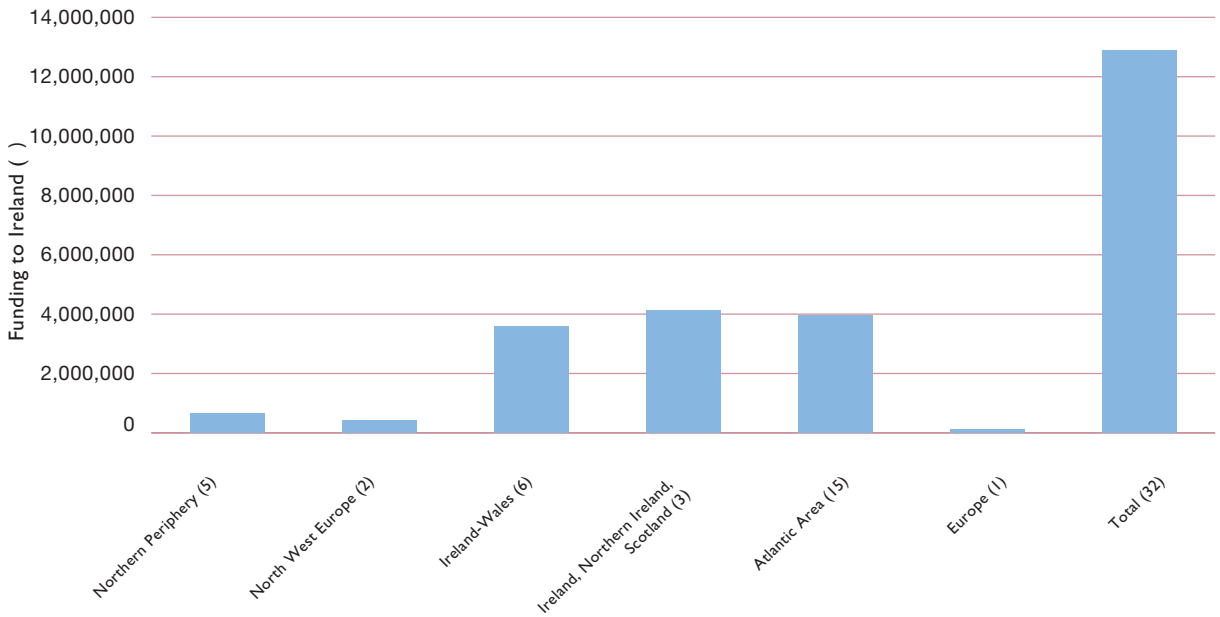

Figure 3.2.
Value (€) of funding to Ireland from INTERREG-IV projects in the period 2007-2010.The number of projects in each programme is outlined in parentheses.

EUROPEAN REGIONAL DEVELOPMENT FUND

3. An Introduction to INTERREG-IV (2007-2013)

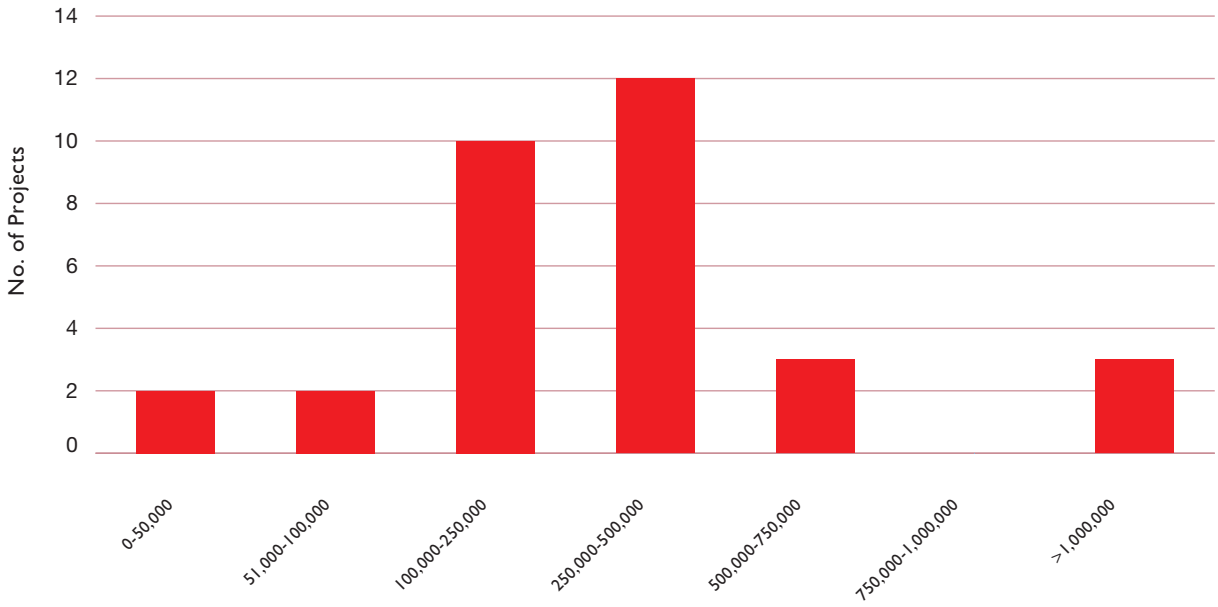

Figure 3.3.
Level of funding (grant-aid) received by Irish partners in INTERREG-IV projects (2007-2010).

3.4 Who does Ireland co-operate with?:

Transnational projects under the INTERREG-IV Programmes can only involve organisations from the Programme specific nominated countries (e.g. Ireland and Wales; Northern Ireland. Scotland and the Republic of Ireland border counties, etc.) (Table 3.1). It is hardly surprising therefore that the lead partners are the UK (41%), France (19%), Ireland (16%), Spain (9%) and Portugal (9%) (Figure 3.4).

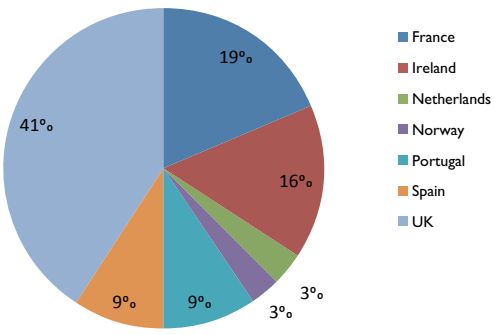

Figure 3.4
Breakdown of countries which lead EU INTERREG-IV funded marine research projects with Irish participation.

3.5 Who are the top Irish marine INTERREG-IV performers?:

As in the FP7 Programme, performance can be gauged by either (a) who leads an INTERREG-IV project or (b) the total grant-aid accumulated by a particular organisation or institute.

Ireland currently leads four INTERREG-IV projects (i.e. IMCORE, NetAlgae, SAIL-WEST and WATER,) (Table 3.3).

The top Irish performers in terms of total grant-aid are: Donegal County Council (1 project - €2.8 million – 21%); UCC (9 projects, grant-aid: 1.9 million – 14%); UCD (1 project - €1.5 million – 11%); NUIG (6 projects - €1.3 million – 9%). The Third Level Institutes are the primary recipients, receiving approximately 47% of the total Irish funding, followed by Public Bodies with 28% of the total Irish grant-aid.

3. An Introduction to INTERREG-IV (2007-2013)

Programme	ACRONYM	Project Title	Lead Partner	No. of partners
I-IVB, NWE	IMCORE	Innovative Management for Europe's Changing Coastal Resource	CMRC-UCC	17
I-IV, AA	NetAlgae	Inter-regional network to promote sustainable development in the marine algal industry	Indigo Rock Ltd.	8
I-IVB, NPA	WATER	Warning of Algal Toxin Events to Support Aquaculture in the NPP Coastal Zone Region	NUI-Galway	6
I-IVA, INIS	Sail West	Sail West Leisure Project	Donegal County Council	20

Table 3.3
Irish participation in INTERREG-IV Programmes (2007-2010).

3.6 INTERREG-IV and the National Sea Change Strategy: In 2010/2011 (December 2010- March 2011), the Marine Institute undertook a preliminary analysis of the contribution of FP7 and INTERREG-IV projects to the aims and objectives of the national Sea Change Strategy (Annex 3).

Twenty-five collaborative INTERREG-IV projects, involving 21 Irish organisations, were identified as contributing to the Sea Change Agenda. Projects addressing marine tourism and leisure (including maritime heritage) were not included as this topic was not part of the Sea Change Agenda over the period (2007-2010) in question. These 25 projects are drawing down over €9.2 million in grant-aid and represent a total EU/Member State investment of over €62 million. A preliminary analysis of INTERREG-IV project returns, based on responses from 21 (84%) of the 25 INTERREG-IV projects surveyed, indicated that these INTERREG-IV projects were contributing positively to the aims and objectives of the Sea Change Strategy, particularly in the areas of Policy (10 projects), Industry (8 projects) and Discovery (5 projects). The 21 projects surveyed are also supporting 64 new posts including: 44 new researcher posts; 7 other support staff as well as 13 PhD scholarships (Table 3.4).

3.7 Useful References

Marine Institute (2006). Directory of Irish marine successes in the EU Regional Development INTERREG-III Programme 2000-2006. Marine Institute (June 2006). Compiled by Mercer, M., Meade, C., & G. O'Sullivan. 42pp.

Marine Institute (2010). Irish marine projects supported by the EU INTERREG-IV Programme: 2007-2010. Marine Institute (September 2010). Compiled by O'Sullivan, G. & S. Twomey. 38pp.

Marine Institute (2011). The contribution of Irish research involvement in EU funded Research Programmes to the achievement of the aims and objectives of the Sea Change Strategy 2007-2013. Internal Report prepared as a contribution to the Mid-Term Review (2007-2010) of the Sea Change Strategy. O'Sullivan, G., Nic Aonghusa, C. & A. Kenny (Marine Institute 2011) 71pp.

	3rd Level Institute	Association	Public body	Public Research Institute	SME	Grand Total
Researchers	26	0	0	2	0	**28**
Research Assistants	11	0	0	3	2	**16**
Technicians	0	0	0	0		**0**
Other	2	2	2	1	0	**7**
PhD	13	0	0	0	0	**13**
TOTAL	**52**	**2**	**2**	**6**	**2**	64

Table 3.4
New research and associated posts secured under EU INTERREG-IV grant-aid and contribution to Sea Change Priority areas and host organisations.

Celtic Wave – Developing a Sea of Smiles

Project Details
Funding Programme: INTERREG-IVA
Sub-Programme: Ireland – Wales Programme
Priority: Knowledge, Innovation & Skills
Project Duration: 2009-2012
Total Project Value: € 1,238,386
EU Grant-Aid: € 928,789
Funding to Ireland: € 105,000
Website: http://www.celticwave.eu

Project Description

Rising fuel costs are seriously affecting the profitability of cruise lines leading to a growing desire to become more fuel efficient. CELTIC WAVE aims to demonstrate how reduced fuel costs can be achieved on selected cruise itineraries by minimising steaming times between ports and in parallel lowering the carbon footprint. The project will also address the added values of the brand, cultural synergy, location, shared values and unique selling points of the Ireland Wales connection. This will result in a globally competitive offering on the Irish Sea as a cruise destination which will raise its profile and contribute to the regeneration of both areas. The CELTIC WAVE project has the following four objectives:

- To create one managed brand for the Irish Sea;
- To promote the Irish Sea as a cruise ship destination;
- To create a consistent welcome for cruise passengers who visit the 6 ports of the Irish Sea.

Project Partners	
Project Coordinator	Isle of Anglesey County Council (Wales)
Ireland	Port of Cork Port of Dublin Port of Waterford
Wales	Port of Milford Haven Swansea Port Port of Holyhead (Anglesey)

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CSTP – Celtic Sea Trout Project

Project Details
Funding Programme: INTERREG-1VA
Sub-Programme: Ireland – Wales Programme
Priority: 2.1
Project Duration: 2009-2012
Total Project Value: € 2,081,841
EU Grant-Aid: € 1,561,381
Funding to Ireland: € 619,221
Website: www.celticseatrout.com

Project Description

Sea trout fisheries in parts of Britain and Ireland, including the Irish Sea, are suffering a serious decline. The pattern of decline is however mixed and in most cases, the causes of change and the solutions are poorly understood. The CSTP intends to provide this missing knowledge and to translate it into fishery and conservation benefits for countries bordering the Irish Sea.

The Celtic Sea Trout Programme aims are:

1. To understand and describe sea trout stocks in the Irish Sea and thereby to enhance sea trout fisheries and strengthen their contribution to quality of life, to rural economies and to national biodiversity;
2. To explore the use of sea trout life history variation as a tool to detect and understand the effects of climate change.

This project involves the collection of sea trout samples from 80 rivers (of which 20 have been targeted for detailed sampling), estuaries, coastal waters and further offshore, over three years. The samples will be mostly of fin clips and scales, accompanied by accurate size information; but whole fish will also be taken to examine feeding and other aspects of biology. The samples will be processed to describe stock structures and distributions (using micro-chemistry and genetics), life histories, growth and survival (from scale analysis) and feeding. From these data, and reviews of the fisheries and freshwater trout production, a picture will be assembled of the quality and quantity of sea trout stocks and fisheries around the Irish Sea. Various modelling approaches will be used to pull the information together to show the interactions between stocks, fisheries and the environment at sea and in freshwater, and thus to help to explore management options.

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Project Partners	
Project Coordinator	University of Wales, Bangor
Ireland	Inland Fisheries Ireland Marine Institute University College Cork (ZEPS) Angling Clubs
Wales	Bangor University Environment Agency Welsh Assembly Government Angling Clubs

ECOJEL – Managing the Opportunities and Detrimental Impacts of Jellyfish in the Irish Sea

Project Details
Funding Programme: INTERREG-IVA
Sub-Programme: Ireland – Wales Programme
Priority: 2. Climate Change and Sustainable Regeneration
Project Duration: 2008-2012
Total Project Value: € 967,000
EU Grant-Aid: € 724,940
Funding to Ireland: € 266,000
Website: www.jellyfish.ie

Project Description

There is concern that the abundance of jellyfish is increasing globally as a result of climate change. The ecosystem impacts of jellyfish (both positive and negative) and consequently their socio-economic importance may, therefore, increase. The aim of the ECOJEL project is to identify and manage the jellyfish threats and opportunities which may result from climate change in the Irish Sea.

ECOJEL will identify the threat of jellyfish nuisance blooms to bathers, to fisheries and aquaculture and to ecosystem health in the Irish Sea. The project will establish the movements and origin of pest jellyfish through the development of innovative tracking technologies.

By determining the diet, abundance and distribution of jellyfish in the Irish Sea, and then compiling this data into an ecosystem model, ECOJEL can identify how jellyfish impact on the expanding aquaculture industry and on established fisheries, and whether the Irish Sea is likely to experience (if not already) a regime shift i.e. a shift from a fish dominated sea to one that is dominated by jellyfish (such regime shifts have already happened in other parts of the world).

Finally, the project will examine emerging markets for jellyfish products (e.g. for human consumption in far-eastern markets) which are supporting new jellyfish harvesting industries. In the Irish Sea, the barrel jellyfish seems to fit the requirements for harvesting (large size, suitable colour and texture, non-venomous, very abundant). Also, learning from the experience of other countries, the Irish Sea offers the potential of a recreational hotspot for divers to swim with blooms of giant jellyfish.

Key outputs to date include: Oral presentation to the European Parliaments 'Seas and Coastal Areas' Intergroup on the increase of jellyfish; several peered reviewed publications including one in Global Change Biology: 'Have jellyfish in the Irish Sea benefited from climate change and overfishing?

Project Partners	
Project Coordinator	Swansea University (Wales)
Ireland	University College Cork (CMRC) Irish Ferries (Associate Partner)

For further information contact:

Irish Partner
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W: http://cmrc.ucc.ie/

Rising Tide – Connecting Celtic Communities

Project Details
Funding Programme: INTERREG-IVA
Sub-Programme: Ireland – Wales Programme
Priority: Sustainable Regeneration
Project Duration: 2009-2012
Total Project Value: € 1,550,000
EU Grant-Aid: € 1,517,375
Funding to Ireland: € 589,836
Website: www.rising-tide.eu

RISINGTIDE
connecting celtic communities

Project Description

RISING TIDE covers a geographical area of 6 counties on the West Wales Coast, with a similar geographical area in South East Ireland. By investing in 6 maritime events in towns within these areas, over the 3 year period of the project; it is intended that this will bring a positive effect on those local economies, whilst also creating some sustainability for the future.

RISING TIDE aims to support social inclusion through joint activities, events and training. The project also aims to develop and promote joint opportunities for sustainable community regeneration, drawing on and giving recognition to the maritime identity, maritime heritage and coastal environment of the cross border region. RISING TIDE aims to develop accredited training programmes, with progression routes for marginalised members of the community, which will include the participants' woodworking, construction and design skills, as well as communication, team building and PC use. The project will also work on community regeneration programmes to develop local events, activities and projects with local stakeholders in the development of maritime tourism and the promotion of local enterprise.

RISING TIDE will deliver three key aims, through a mixed programme of supporting existing events and festivals, as well as creating new opportunities to develop the following:

- Social inclusion through training and development;
- Promotion of maritime heritage and culture;
- Economic regeneration in communities.

For further information contact:

Irish Partner
The John F. Kennedy Trust,
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Project Partners	
Project Coordinator	Milford Haven Port Authority
Ireland	The John F. Kennedy Trust Wexford Local Development / County Wexford Patnership
Wales	Pembrokeshire College Marine Technology and Boat Building Centre (MITEC)

SCSC – Smart Coasts = Sustainable Communities

Project Details
Funding Programme: INTERREG-IVA
Sub-Programme: Ireland – Wales Programme
Priority: 2.1
Project Duration: 2010-2013
Total Project Value: € 4,355,404
EU Grant-Aid: € 3,100,000
Funding to Ireland: € 1,400,000
Website: http://www.smartcoasts.eu/

Project Description

The SCSC project focuses on two inter-dependent demonstration projects which will be established to illustrate the methods needed to implement real-time bathing water management, public health protection and sustainable bathing water compliance in complex bathing water systems and off the Irish east coast (south of Dublin - adjacent to the Dargle catchment).

SMART COAST= SUSTAINABLE COMMUNITIES will complement both the aims of the Lisbon Strategy and the Gothenburg Declaration by contributing directly to sustainable development. The core aim of this project is to equip Irish and Welsh INTERREG area communities to maintain the economic and strategic value of near-shore waters to their economies. This will be done by facilitating the application of new real-time management systems, first suggested by the World Health Organisation and soon to be allowed within EU Directive criteria. This will ensure no adverse loss of beach awards, such as blue flags, and the maintenance of public health through the deployment of ICT tools and real-time public information systems as suggested by WHO and allowed in (but not a regulatory requirement of) in the 2006 Bathing Water Directive. The Irish partner (UCD) also contributes predictive hydrological and microbiological modelling combined with innovative IT solutions to advise the general public of bathing water quality in real-time.

Project Partners	
Project Coordinator	University of Aberyswyth (Wales)
Ireland	University College Dublin (UCD)

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SUSFISH – Shellfish productivity in the Irish Sea: Working towards a sustainable future

Project Details
Funding Programme: INTERREG-1VA
Sub-Programme: Ireland – Wales Programme
Priority: 2.2
Project Duration: 2009-2012
Total Project Value: € 2,932,445
EU Grant-Aid: € 2,199,334
Funding to Ireland: € 618,399
Website: www.susfish.com

Project Description

SUSFISH will produce guidelines for future fisheries management, ensuring sustainable development of the shellfish industry in Ireland and Wales for the next 50-100 years. This will be achieved by assessing the effects of climate change (via oceanographic models) on shellfish productivity in the Irish Sea and determining adaptation or mitigation strategies for the industry, including recommendations for protection of certain areas (Marine Spatial Planning- MSP). Aspects to be included are how current commercial shellfish productivity in the Irish Sea will respond to changes in temperature, salinity, water quality (eutrophication via organic and inorganic nutrients, acidification), sea level rise and changes in ocean current regimes.

A range of climate change scenarios will be assessed from the IPCC worst-case scenario to conditions in the present day. SUSFISH will have significant socio-economic benefits for both Wales and Ireland, and will also be of international importance, as the project addresses issues that are of global concern.

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E: s.culloty@ucc.ie
Web: http://afdc.ucc.ie

Project Partners	
Project Coordinator	University of Wales, Bangor
Ireland	University College Cork (ZEPS/AFDC)
Wales	Aberystwyth University Swansea University

EUROPEAN REGIONAL DEVELOPMENT FUND

BIOMARA – Blue Energy – Sustainable Fuels from Marine Biomas

Project Details	
Funding Programme:	INTERREG-1VA
Sub-Programme:	Ireland, Northern Ireland, Scotland
Priority:	????
Project Duration:	2009-2013
Total Project Value:	€ 5,996,079
EU Grant-Aid:	€ 4,874,414
Funding to Ireland:	€ 1,000,401
Website:	www.biomara.org

BioMara

Project Description

BioMara will investigate both macroalgae (seaweeds) and single-celled microalgae as potential sources of biofuel. The project includes a techno-economic evaluation of potential systems, environmental impact assessment and an ongoing process of stakeholder engagement to ensure that the ultimate findings of the research have wide applicability.

The initial focus for the strategic collaborative approach will be the creation of new knowledge. The primary purpose of this new knowledge is to raise the efficiency of existing technology and introduce new algae to biofuel technologies. The dissemination of the new knowledge will be a priority and training, support and advice will be provided to end users through appropriate networks and industry associations. Innovation and entrepreneurship will be fostered through these networks.

Much of the focus will be on local generation of energy needs in a carbon-neutral and sustainable manner.

Traditional infrastructure is geared to fossil fuels and to their importation, distribution and large-scale use or conversion into appropriate forms of energy. The infrastructural needs of new, smaller-scale and more local production of liquid and gas biofuels will need to be re-thought and new, more appropriate, cross-border and multi-purpose forms of infrastructure introduced, which are softer and less expensive than traditional energy supply infrastructure such as under-sea cables.

The project will determine which types of organisms are best suited to biofuel production and the best growing conditions by testing for various aspects of suitability by a process of elimination.

Irish BIOMARA researchers at Dundalk IT and IT Sligo are researching paths to transform marine biomass into bioethanol or biogas. IT Sligo have specific expertise in anaerobic digestion and are applying this expertise to marine biomass. Dundalk IT are researching routes to bioethanol as well as biogas production from marine macroalgae.

Project Partners	
Project Coordinator	Scottish Association for Marine Sciences (UK)
Ireland	Institute of Technology, Sligo Dundalk Institute of Technology (DIT)
United Kingdom	University of Strathclyde University of Ulster Queens University Belfast

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ISLES – Irish Scottish Links on Energy Study

Project Details
Funding Programme: INTERREG-1VA
Sub-Programme: Ireland, Northern Ireland, Scotland
Priority: ????
Project Duration: 2010-2011
Total Project Value: € 1,875,141
EU Grant-Aid: € 1,718,696
Funding to Ireland: € 470,500
Website: www.islesproject.eu

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Project Description

The Irish Scottish Links on Energy Study (ISLES) is a joint project between the Scottish Government, the Department of Enterprise, Trade and Investment (Northern Ireland) and the Department of Energy, Communications and Natural Resources (Ireland).

The coastal areas of western Scotland, Ireland and Northern Ireland have some of the best offshore wind, wave and tidal resources in Europe. However, each region faces common challenges in developing its electricity grid infrastructure and addressing technological, regulatory, trading and financing challenges in order to harvest, connect and transport these major renewable energy resources. An offshore interconnected transmission network offers the potential for the partner governments to capitalise fully on this abundant offshore renewable energy potential. The ISLES study will help achieve this.

The project will examine the feasibility of the construction of an offshore electricity transmission network linking potential offshore sites for the generation of renewable energy in the coastal waters of Ireland, Northern Ireland and Western Scotland. The feasibility study will develop a business case for the construction of such a grid and will examine the following aspects: - technology and infrastructure; environment and planning; regulatory and finance; and construction and deployment. The study will also involve close co-operation with the energy industry and other stakeholders involved in grid transmission systems and renewable energy.

Project Partners	
Project Coordinator	The Scottish Government (UK)
Ireland	Department of Communications, Energy and Natural Resources in Ireland (DCENR)
United Kingdom	Department of Enterprise, Trade and Investment in Northern Ireland

EUROPEAN REGIONAL DEVELOPMENT FUND

SAIL WEST – Sail West Leisure Project

Project Details
Funding Programme: INTERREG-1VA
Sub-Programme: Ireland, Northern Ireland, Scotland
Priority: ????
Project Duration: 2009-2013
Total Project Value: € 7,406,840
EU Grant-Aid: € 7,025,046
Funding to Ireland: € 2,646,397
Website: www.donegalcdb.ie

MalinWaters

Project Description

The Sail West Project is a marine tourism initiative which will develop a marine leisure infrastructure and product along the Irish coast from County Sligo to County Antrim and along the West coast of Scotland from Stranraer to Mallaig.

As lead administrative partner, Donegal County Council has been working with partners in Ireland, Northern Ireland and Scotland since 2007 to develop a joint strategic plan for marine leisure in the shared coastal zone which formed the basis of this funding award. The west coast of Scotland is one of the world's most popular sailing destinations and wishes to work with the north coast of Ireland to develop a new sailing zone and marine leisure brand through renewed infrastructure and marketing.

INTERREG and the three National Governments have agreed to support the plan's €7.4m investment with grants totalling €7.025m over the period 2009-2013. This includes €1.6m to develop Bunagee Harbour in Inishowen as a sea angling and marine leisure centre. Donegal County Council will also lead on a €750,000 marketing initiative that will put the county's marine leisure product in the shop window with that of the Ulster coastline and the West Coast of Scotland.

Project Partners	
Project Coordinator	Donegal County Council (Ireland)
Ireland	Border Regional Authority, Loughs Agency and Sligo County Council
United Kingdom (Northern Ireland)	Carrickfergus Borough Council, Coleraine Borough Council, Derry City Council, Larne Borough Council, Limavady Borough Council Loughs Agency and Moyle District Council
United Kingdom (Scotland)	Argyll and Bute Council, Dumfries and Galloway Council, Highland Council, Highlands & Islands Enterprise, Irvine Bay Regeneration Company, North Ayrshire Council, Scottish Enterprise, South Ayrshire Council, VisitScotland

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AARC – Atlantic Aquatic Resources Conservation

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: Atlantic Area
Priority: 2.4
Project Duration: 2010-2012
Total Project Value: € 3,870,695
EU Grant-Aid: € 2,515,951
Funding to Ireland: € 471,191
Website: http://aarcproject.org

Project Description

The AARC project will advance and expand the important work delivered through the Atlantic Salmon Arc Project (ASAP) in the previous phase of INTERREG-III Atlantic Area funding. This project will deliver five primary work packages within a structured project framework, led by experienced European project managers. The objective will be to integrate recreational angling with conservation and research, in order to ensure a sustainable, well funded future for angling and for the Atlantic salmon along with other important fish species, linked by nature, culture and economy.

These five work packages include:

1. The delivery of freshwater habitat restoration according to best practice methods in participating regions;
2. An umbrella sports fisheries development agenda for the Atlantic Regions;
3. A regional hatchery support facility;
4. Sea fishermen liaison;
5. Cross cutting theme of education and promotion.

The main aim of AARC is to cooperate intensively to deliver a strategy for Integrated Water Resource Management (IWRM), which will be demonstrated across the Atlantic Area, in targeted river basins, networked by regional/river observatories in each member state.

The AARC project in Ireland will help increase our understanding of some of the factors causing salmon population declines in the River Shannon and how they might be addressed by using new developments from the study of restoration ecology. In the context of the Shannon Salmon Restoration Project objectives, published by the former Shannon Regional Fisheries Board, AARC will provide an important impetus by identifying the current status of salmon production in the Shannon, coordinating the activities of national authorities and scientific institutions and by applying genetic knowledge to provide a basis for the rehabilitation of salmon in the upper Shannon.

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Project Partners	
Project Coordinator	Westcounty Rivers Trust (England)
France	French National Institute for Agricultural Research (IRNA)
Ireland	Shannon Regional Fisheries Board (SRFB) University College Cork (ZEPS)
Portugal	Development Association of Dao, Lafoes and Alto Paiva (ADDLAP) Association for Integrated Development in Ribatejo Norte (ICETA)
Spain	University of Oviedo
United Kingdom	University of Exeter The Environment Agency

ANCORIM – Atlantic Network for Coastal Risk Prevention and Management

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: Atlantic Area
Priority: 2.4
Project Duration: 2009-2012
Total Project Value: € 1,891,752
EU Grant-Aid: € 1,228,110
Funding to Ireland: € 281,337
Website: http://atlanticprojects.ccdr-n.pt/project-area/ancorim

ANCORIM
ATLANTIC NETWORK FOR COASTAL RISKS MANAGEMENT

Project Description

The ANCORIM project aims to build the operational capacities of decision-makers from the Atlantic regions in order to manage and prevent coastal risks, and particularly those related to climatic change. Capacity building entails making practical use of the scientific and technical information that is translated, interpreted and made available to coastal managers, so as to improve the relevance of their decisions relating to (i) coastal management and development (in terms of risk prevention); (ii) the handling of potential crises should the integrity of coastal systems be violated.

The approach of this project aims to intensify relations and materialise tools promoting exchanges between the scientific community and decision-makers from various sectors: politics, the private sector, joint-trade organisations, associations and the various levels of territorial decision-makers and stakeholders, be they local, regional or national.

Through 5 Work Packages organised according to 3 phases over 3 years, the project will support the development of innovative interfaces enabling easier and broader access to practical, useful and quality information in the various fields of coastal risk prevention. Beyond the expected products, the Work Packages and programmes will enable networking among the parties involved in coastal activities at Atlantic Arc level and make it possible for them to access the existing initiatives and good practices more easily. The approach of the project is also based on developing and taking into account the projects built as part of INTERREG III, and on developing synergies with the other regional sea projects implemented within the framework of INTERREG IV and the Atlantic Area Operational Programme 2007-2013.

Project Partners	
Project Coordinator	Aquitaine Regional Council (France)
Ireland	National University of Ireland, Galway (NUIG) Udarás na Gaeltachta Mayo County Council
France	Bureau of Geological and Mining Research (BRGM) Centre for the Experimentation and Development of Marine Aquaculture (CREAA) Atlantic Institute of Spatial Planning (IAAT) Regional Council of Brittany Cap l'Orient GEOS French Research Institute for the Exploitation of the Sea (IFREMER)
Portugal	National Laboratory of Civil Engineering (LNEC) Institute of Hydraulics and Water Resources (IHRH) University of Coimbra
Spain	Diputacion Provincial de A Coruna, CETMAR University of Vigo Dept. of Environment and Sustainable Development

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ARCOPOL – Atlantic Regions Coastal Pollution, Response and Management

Project Details	
Funding Programme:	INTERREG-IVB
Sub-Programme:	Atlantic Area
Priority:	2.1
Project Duration:	2008-2011
Total Project Value:	€ 3,072,233
EU Grant-Aid:	€ 1,996,932
Funding to Ireland:	€ 130,000
Website:	www.arcopol.eu/home.aspx

ARCOPOL

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Project Description

The sustainability and improvement of maritime transport and the protection of coastal resources strongly depends upon the improvement of oil, hazardous and noxious substances (HNS) and inert spill prevention, response and mitigation capabilities of coastal regions. Such improvement can only be achieved by developing effective tools and action plans coupled with training and awareness activities at regional and local levels. ARCOPOL brings together a consortium of partners involved in the EROCIPS project (INTERREG IVB) (www.erocips.org). EROCIPS focused on the prevention, response to and mitigation of oil spills. Based on the experience acquired through EROCIPS, ARCOPOL aims to improve prevention, response and mitigation capabilities against oil, HNS and inert spills and to establish the basis for a sustainable Atlantic network of experts supported by adequate information, data exchange and management tools.

The specific project objectives are:

1. To incorporate outputs from EROCIPS into strategic national, regional and local response levels and to encourage development of transferable transnational techniques that strengthen statutory and non statutory emergency response;
2. Improve response capabilities in the event of HNS and inert spills and to include them in emergency action plans. This will be achieved by compiling and assessing current knowledge, practices and experiences and by developing tools, models, systems and procedures;
3. Improve the level of awareness and training of the potential responders and increase the degree of stakeholder involvement;
4. Further encourage cross border collaboration between neighbouring countries to improve response strategies and enhance mutual aid capabilities, facilitating joint cross border training and exercises in the partner regions;
5. Improve mitigation capabilities by assessing the current claims and compensation mechanisms as well as ecological damage compensation procedures and by developing guidelines, tools and standard methodologies.

ARCOPOL will enhance mutual aid mechanisms, promote coherence of actions at regional and local level, foster dialogue between all the actors and support the development of relevant information and knowledge about the coastal zone and the risks that threaten it.

Project Partners	
Project Coordinator	Centro Tecnologica de Mar Fundacion CETMAR (Spain)
France	Regional Council of Brittany Aquitaine Regional Council VIGIPOL
Ireland	Marine Institute
Portugal	Technical University of Lisbon (IST) Interdisciplinary Centre for Marine and Environmental Research, Porto (CIIMAR)
Spain	Dept. of Environment and Sustainable Development Dept. of Fisheries and Marine Affairs Institute of Marine Environment Control of Galicia (INTECMAR) Environment Management Company (EGMASA)
United Kingdom	Pembrokeshire County Council

ATLANTOX – Advanced tests about new toxins in the Atlantic Area

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: Atlantic Area
Priority: 2.4
Project Duration: 2008-2010
Total Project Value: € 1,839,463
EU Grant-Aid: € 1,195,651
Funding to Ireland: € 136,640
Website: www.atlantox.com

Project Description

The effects of climate change and rising global temperatures are imminent, irreversible and directly or indirectly impact on the marine environment and coastal populations. Marine ecosystems are affected by fluctuations in water temperatures which produce favourable ecological conditions for the development and release of algal toxins. Although the Atlantic area coast is probably not the most impacted, affects are already visible and worrying and require action to ensure optimum levels of food safety for people of this coastal area and to minimize the further impact on sectors such as fisheries and tourism.

Toxic episodes are a major public health problem whose impact is felt in areas such as tourism and in a reduced consumption of seafood. To address this, a fast, effective and reliable toxin detection system is required. The current mode of reference in the European Union, the mouse bioassay, is not sufficiently sensitive, requires time, is vulnerable to interference and is unethical in terms of animal welfare.

The objective of the ATLANTOX project is to support and accelerate the development and introduction of more efficient methods of fast toxin testing based on antibodies and functional tests for biotoxins.

Project Partners	
Project Coordinator	University of Santiago de Compostela (Spain)
France	Laboratory of Cellular and Molecular Neurobiology, Paris (CNRS)
Ireland	Cork Institute of Technology (CIT)
Spain	National Association of Canned Fish and Shellfish (ANFACO-CECOPESCA)
Portugal	Centre for Marine and Environmental Research, Porto (CIIMAR)
Spain	National Association of Canned Fish and Shellfish (ANFACO-CECOPESCA)
United Kingdom	Institute of Agri-Food and Land-use, Queen's University, Belfast Agri-Food And Biosciences Institute (AFBI), Belfast

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BIOTECMAR – Biotechnological exploitation of marine products and by-products

Project Details
Funding Programme: INTERREG-1VB
Sub-Programme: Atlantic Area
Priority: ???????
Project Duration: 2009-2011
Total Project Value: € 2,322,692
EU Grant-Aid: € 1,500,000
Funding to Ireland: € 291,778
Website: www.biotecmar.eu

Project Description

Marine biological resources such as seaweeds, fish and shell fish products are sources of valuable ingredients and bioactive molecules. Their exploitation using biotechnological tools is likely to lead to the development of new markets and industries, specifically in the areas of food, feed, nutrients, cosmetics, and, in some cases, therapeutic agents.

BIOTECMAR's overall aim is to help the companies of Atlantic Area (which are mainly SMEs) to take advantage of the use of modern biotechnological tools and contribute to a diversification of the activities derived from marine biomass exploitation within the strict framework of sustainable management of marine natural resources. The better use and a rational upgrading of the products and by-products treated along the marine resources value chain is a problem common to the different European regions bordering the Atlantic. However, knowledge and technical approaches present real regional specificities. The project will give the necessary impulse for transforming these complementary regional skills into real transnational synergies, through exchange of good practices, mobility of researchers and technicians, knowledge and technology transfer.

BIOTECMAR brings a real added value as the technologies proposed to industries are relevant to process biotechnologies (white biotechnologies) and are innovative in this type of industry. They respond to immediate and future problems and, therefore, need to be largely communicated and transferred to professionals. A series of specific actions: workshops; technical sessions; a targeted technological survey; mobilisation of the skills present in the partner R&D centres; information and training/education; as well as in contacting the stakeholders of the marine value chain. Together, all these elements guarantee the realisation of BIOTECMAR's objectives.

The various sectors concerned by the project are the following:

- The fisheries, aquaculture, seaweed harvesting and seafood processing as source of raw materials;
- The fish waste conservation, collection and transport and processing;
- The production and commercialization of bioactive compounds and/or ingredients derived from processing to be used for the food, feed, nutrients, cosmetics and therapeutic industries;
- The development and the transfer of R&D in marine biotechnology.

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Project Partners	
Project Coordinator	LEMAR - IUEM / UBO, University of Brest (France)
France	University of Nantes. University of La Rochelle French Research Institute for the Exploitation of the Sea (IFREMER) Technopole Quimper Cornuaille Museum of National History, Paris (MNHN)
Ireland	Indigo Rock Marine Research Centre Irish Seaweed Research Group (ISRG), NUIG
Portugal	Portuguese Institute of Sea and Fisheries Research (IPIMAR) Business and Innovation Centre of Porto(NET)
Spain	Spanish National Research Council (CSIC) CETMAR Foundation

CRUISE ATLANTIC EUROPE

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: Atlantic Area
Priority: ???????
Project Duration: 2008-2011
Total Project Value: € 739,698
EU Grant-Aid: € 480,803
Funding to Ireland: € 108,278
Website: www.cruiseatlanticeurope.com

cruiseatlanticeurope

Project Description

The Atlantic Area comprises one of the most important maritime coastlines in Europe, encompassing close to 70 million inhabitants. It is a coastline that accommodates a large number of ports and major maritime cities with long traditions and a vibrant dynamism.

The Atlantic Europe Partnership has been created to reinforce the position of the Atlantic area in the European cruise tourism market. The creation and promotion of new tourist products, through the action of a network of ports, cities and regions, emphasises the value of economic prosperity, regional culture and Atlantic identity. The diverse number of ports and attractions that feature along the European Atlantic coastline allows for a wide range of tourism cruise routes.

The Cruise Atlantic Europe partnership is the initiative of a group of ports on the Atlantic front including: - Lisbon, Leixões, La Coruña, Bilbao, Brittany, Dover and Cork.

See Countries – See Culture – Sea Life

Project Partners	
Project Coordinator	Port of Leixões (APDL) (Portugal)
France	Commercial Port of Lorient South Brittany (LCBS)
Ireland	Port of Cork
Portugal	Port of Lisbon
Spain	Port Authority of Coruña Port Authority of Bilbao
United Kingdom	Dover Cruise Port

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EasyCo – Collaborative Atlantic Space Biogeochemical Forcasting System

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: Atlantic Area
Priority: 2.2
Project Duration: 2008-2011
Total Project Value: € 2,688,476
EU Grant-Aid: € 734,536
Funding to Ireland: € 299,980
Website: http://www.project-easy.info/

Project Description

EASYCO aims to build a Polycentric Infrastructure for Operational Ocean Modelling in the Atlantic Space (AS) by joining the capacities of the 5 partner countries to forecast hydrodynamics and biogeochemistry at the regional scale using grid sizes of a few kilometres. EASYCO is a transversal project producing results for a wide range of users, including Navigation Safety, Fisheries, Aquaculture, Coastal Management and Meteorology. Direct end-users are institutions requiring results at the regional scale while indirect end-users are all the institutions requiring information at the local scale (e.g. coastal managers, fish farmers, ports, water companies, water authorities), usually provided for by SMEs.

EASYCO builds on the successful experience gathered within the project EASY, which focused on currents and waves in the Iberian zone, widening its scope through the contribution of extra teams from France, Spain, Ireland and UK.

The specific objectives of EASYCO are:

1. Integrating operational forecasts of currents, waves and meteorology over the whole AS;
2. Integrating BGC models developed in the AS for producing operational BGC forecasts over the whole area;
3. Setting up fisheries management models based on the BGC data and on the fishing effort;
4. Setting up a filter feeders model able to relate growth, carrying capacity, primary production and circulation models;
5. Setting up a users-community grouping institutions needing information on currents and biological properties for their daily activities, with special emphasis on SMEs.

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Project Partners	
Project Coordinator	Marine and Environmental Technology Centre (MARETEC), Technical University of Lisbon (Portugal)
France	French Research Institute for the Exploitation of the Sea (IFREMER) MERCATOR Operational Oceanography, Toulouse University of Pau and Pays de l'Adour (UPPA)
Ireland	Marine Institute
Portugal	University of the Azores
Spain	MeteoGalicia- Meteorological Agency of Galicia Institute of Marine Environment Control of Galicia (INTECMAR) Spanish State Ports Agency (Puertos del Estado)
United Kingdom	Centre for Environment, Fisheries and Aquaculture Science (CEFAS)

KIMERAA – Knowledge Transfer to Improve Marine Economy in Regions from the Atlantic Area

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: Atlantic Area
Priority: 1.2
Project Duration: 2010-2012
Total Project Value: € 1,081,019
EU Grant-Aid: € 702,662
Funding to Ireland: € 90,058
Website: www.kimeraa.eu

KIMERAA
KNOWLEDGE TRANSFER TO IMPROVE MARINE ECONOMY IN REGIONS FROM THE ATLANTIC AREA

Project Description

The KIMERAA project aims to develop economic niches of excellence through the creation of bridges and links between scientific knowledge and firms in the marine sector. To achieve this goal it is important to establish and develop knowledge transfer channels connecting the various institutional actors/knowledge providers that can support the marine economy across the Atlantic Area. In so doing, the project aims to transform European research into profitable high value-added products and services.

By taking this approach, the project will provide a greater awareness and knowledge of Maritime Clusters, the innovation actors and institutions in the Atlantic Area. It is anticipated that these will be profiled, competencies and services catalogues will be developed for each participating region to create a transnational web tool to match research capabilities, knowledge and technology to market demands. Finally, a European Network of Knowledge Transfer across the Atlantic Area will be promoted to give sustainability to the results; including promotion and facilitation of spin-outs, licensing of activities and sponsored/collaborative projects.

In practice the project will entail the following activities:

1. Identify the main centers of R&D linked to the Marine Sector in the participating regions;
2. Detect successful company spin-outs and marine SMEs in the regions;
3. Benchmark best practice in research and commercialisation of scientific knowledge in the marine sector;
4. Create an internet platform where R&D Centers and firms can match their interests to assist diffusion and trans-regional co-operation;
5. Create new opportunities through linkages between traditional sectors and applied innovation in marine science;
6. Improve competitiveness in the marine sector by facilitating the development of spin-outs, launching scientific partnerships and improving the modernisation/internationalisation of existing firms.

The Irish input to this project is led by WESTBIC - the Business and Innovation Centre for the Border, Midlands and West region. Initially this has involved desk research identifying for the Lead Partner, the key players in the Marine sector and the supports available from public and private sector agencies. This profile of the Marine activity will help other partners gain knowledge of the strengths and weaknesses of the sector in Ireland and provide the basis for exchange of best practice to participating regions.

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Project Partners	
Project Coordinator	University of the Algarve (Portugal)
Ireland	WESTBIC- Business & Innovation Centre
Portugal	University of Porto
Spain	MIK, S. Coop University of Huelva
United Kingdom	Cardiff University

MAREN - Marine Renewable Energy, Energy Extraction and Hydro-environmental Aspects

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: Atlantic Area
Priority: 2.3
Project Duration: 2008-2011
Total Project Value: € 1,655,508
EU Grant-Aid: € 1,075,943
Funding to Ireland: € 332,247
Website: www.marenproject.eu

Project Description

The positioning of marine renewable energy devices in estuarine and coastal waters will undoubtedly have an impact on water levels and, in particular, tidal currents, which will in turn have a significant impact on the environmental and economic aspects of the site. So-called 'clean' energies sometimes have negative environmental impacts; therefore there is some pressure to develop a comprehensive and integrated approach to analysing all factors to assist decision makers in choosing which form of energy to develop and where to locate the generation sites. The mix and balance of different energy sources will be as important in the future to the sustainable spatial development of Europe as the development and exploitation of each type of energy itself. The MAREN project concentrates on getting that balance right.

The main aims of the MAREN project are therefore to:

- optimise the renewable marine energy extraction potential, and
- minimise the hydro-environmental impact of a wide range of the most promising marine renewable energy devices.

The project partners have been chosen to represent the full range of coastal and hydrological conditions, as well as covering the four most relevant types of marine renewable energy devices. Each partner will focus on examining energy extraction and hydro-environmental aspects of a different marine renewable energy device, as indicated below:

- UK: barrages and tidal impoundments;
- Ireland: tidal stream turbines;
- Portugal: wave energy;
- Spain: off-shore wind turbines;
- France: barrage, based on the La Rance barrage scheme.

Collectively, the outcomes from the project activities will provide information on the energy extraction potential of the Atlantic Area coastal waters and enable the prediction of both the impact of marine renewable energy devices on the environment (natural and human) and the impact of the environment on the performance of these devices.

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Project Partners	
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France	French Research Institute for the Exploitation of the Sea (IFREMER)
Ireland	National University of Ireland, Galway (NUIG)
Portugal	Technical University of Lisbon (IST)
Spain	University of Cantabria

MESH-ATLANTIC – Mapping European Seabed Habitats for Better Marine Management

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: Atlantic Area
Priority: 2. Marine Environment & Renewable Energies
Project Duration: 2010-2013
Total Project Value: € 3,499,695
EU Grant-Aid: € 2,274,802
Funding to Ireland: € 245,158
Website: www.meshatlantic.eu

Project Description

Mesh-Atlantic is focused on providing a harmonised seabed habitat map, using the European Nature Information System (EUNIS of the European Environmental Agency) marine habitat classification, across the coastal and shelf zones of the entire Atlantic Area. It is intended that this will serve as an efficient spatial planning tool supporting informed planning and facilitating better management of marine resources.

The main outputs of the project are three sets of habitat maps, made seamless across the study area. These products will be served up for free via an interactive web map server system. The three sets of habitat map are:

1. Those which already exist, but need enhancement and harmonisation;
2. Detailed bespoke maps covering a limited set of NATURA2000 sites - with some transnational ones;
3. A broad-scale modelled map for the Western European marine area resulting from the assemblage of readily available data layers.

Mesh-Atlantic will develop links to marine environment users and managers through multiple communication initiatives. The purpose of this communication strategy is to get feedback from end-users which will inform the project, permitting the creation of habitat maps better adapted to user-community needs.

Project Partners	
Project Coordinator	French Research Institute for the Exploitation of the Sea (IFREMER)
Ireland	Marine Institute
Spain	IEO- Spanish Institute of Oceanography AZTI Foundation
France	IMA- Institute of Aquatic Environments, Bayonne DIREN Bretagne
Portugal	IPIMAR- National Research Institute for Agriculture and Fisheries University of Algarve University of Aveiro University of the Azores ICNB- Institute of Nature Conservation & Biodiversity

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NEA2 – Nautisme Espace Atlantique 2

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: Atlantic Area
Priority: The Marine & Coastal Environment
Project Duration: 2009-2011
Total Project Value: € 4,721,137
EU Grant-Aid: € 3,068,737
Funding to Ireland: € 331,499
Website: www.nea2.eu

Project Description

The NEA2 project is a trans-national initiative to stimulate economic development in the water-sports sector. Building on the success of NEA1 (INTERREG-III), NEA2 aims to develop a cutting-edge water-sports sector within the Atlantic Area, which differs from what is done in this domain in the international arena by delivering:

- economic innovation and performance;
- protection and development of the environment;
- quality of life and social cohesion.

Whilst the first project (NEA1) confined its objectives to the coordinated development of water-sports tourism activities in the Atlantic Area, NEA2 aims to develop trans-national cooperation based on sustainable development of every aspect of the water-sports sector including: supervised and free activities, marinas, water-sports industry, commerce and services.

The aim of the project is to develop water-sports employment and economy through:

1. Forming and boosting trans-national and regional networks of the various water-sports industry sectors; and
2. Forming and creating a network of Centres of Excellence specialising in the sustainable development of the water-sports industry, with visibility at European and international levels.

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Project Partners	
Project Coordinator	Regional Council of Brittany (France)
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Ireland	Mid-West Regional Authority
Portugal	Metropolitan Area of Porto , Intercéltica – Porto, Vale-e-Mar Urban Community, Association of Local Development of Bairrada and Mondego (AD ELO)
Spain	Local Independent Tourism Agency of Rías , Xunta De Galicia- Dept. of Fisheries and Maritime Business, Diputación Provincial de A Coruña City Council of Cambados , Portos de Galicia Public Entity, Galician Association of Marine Activities
United Kingdom	Ards Borough Council, North Devon & Cornwall County Councils

NETALGAE – Inter-regional network to promote sustainable development in the marine algal industry

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: Atlantic Area
Priority: Promotion of entrepreneurial and innovation networks
Project Duration: 2010-2012
Total Project Value: € 2,160,088
EU Grant-Aid: € 1,404,034
Funding to Ireland: € 415,137
Website: http://www.netalgae.eu/

netalgae
INTER-REGIONAL NETWORK TO PROMOTE SUSTAINABLE DEVELOPMENT IN THE MARINE ALGAL INDUSTRY

Project Description

The European macroalgae industry is mainly based on harvesting of natural resources of macroalgae. Worldwide macroalgae production is increasing by 5.7% every year. In 2008, nearly 14 million tons of macroalgae was produced from capture and aquaculture.

In Europe, howeverm production has decreased in the last 10 years. The further expansion of the industry depends on sustainable increased access to raw material, development of valuable products and the transfer of expertise between developed and less developed regions.

The project NETALGAE aims to create a European network of relevant stakeholders within the marine macroalgae sector. Compilation of information from different regions will result in a wide ranging policy study of existing practice within the macroalgae industry. Analysis of the results will establish a best practice model and suggest policies for the successful, sustainable commercial utilization of marine macroalgae resources.

Project Partners	
Project Coordinator	Indigo Rock Marine Research Station (Ireland)
Basque Country	Mutrikuko Institutua Ikaslan Gipuzkoa Tknika
France	AgroCampus West Centre, Rennes University of West Brittany Joint Association of Coastal Equipment
Ireland	Bord Iascaigh Mhara (BIM)
Norway	BIOFORSK- Norwegian Institute for Agriculture and Environment Research
Portugal	University of Algarve
United Kingdom	Viking Fish Farms – Ardtoe Marine Laboratory

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PROPOSSE – Promotion of Short Sea Shipping and Co-operation with SMEs

Project Details
Funding Programme: INTERREG-1VB
Sub-Programme: Atlantic Area
Priority: 3.2 Accessibility and Transport
Project Duration: 2008-2010
Total Project Value: € 2,117,800
EU Grant-Aid: € 1,376,570
Funding to Ireland: € 216,775
Website: www.proposse.eu

Project Description

The Port of Cork Company was invited by the Port of Gijon to participate in an EU funded INTERREG project called 'PROPOSSE'. The project is led by the Port Authority of Gijon while other participants include the ports of Le Harve, Poole, Aviero and the Oviedo Chamber of Commerce.

The overall objective of PROPOSSE is to promote Short Sea Shipping as a real alternative to other means of the transportation of goods (e.g. road) between SMEs from the interior and the ports of Aveiro, Gijón, Le Havre, Poole, and Cork. This will be achieved through:

1. Cooperation between ports and organisations representing SMEs and promotion of regional development in their hinterlands;
2. Identifying the main barriers and potential opportunities for the transfer modal cargo SME Andalusia Short Sea Shipping, and Motorways of the Sea;
3. Increasing awareness of both SMEs and industrial transport operators to the potential and benefits of change modal.

The project involves liaison with SME's in each participating country as they account for circ 70% of business throughout the EU, and inform their transport and logistics providers to the merits of Short Sea Shipping as a viable, cost efficient and environmentally advantageous mode of transport. The advantages for the Port of Cork in being involved in these EU projects include a higher profile in Europe, attraction of new services and cargoes, and building relationships with shipping lines and other Continental ports.

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Project Partners	
Project Coordinator	Port Authority of Gijon (Spain)
France	CRITT Transport & Logistics
Ireland	Port of Cork
Portugal	APA: Administración del Puerto de Aveiro Industrial Association of the District of Aveiro
Spain	Oviedo Chamber of Commerce
United Kingdom	Marine South East Ltd. Port of Poole

SEAFARE - Sustainable and Environmentally friendly Aquaculture for the Atlantic Region of Europe

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: Atlantic Area
Priority: Protect, serve, and enhance the marine environment and coastal environmental sustainability
Project Duration: 2010-2013
Total Project Value: € 3,179,473
EU Grant-Aid: € 2,066,657
Funding to Ireland: € 181,024
Website: www.seafareproject.eu

Seafare
Sustainable and Environmentally friendly Aquaculture For the Atlantic Region of Europe

Project Description

The aquaculture industry is an important contributor to the economic well-being of the Atlantic Area, particularly in rural peripheral areas. However, aquaculture in Europe must be developed in line with stringent EU rules which generate competition from other world regions, particularly Asia and Latin America. The EU aquaculture sector has remained stagnant for the past decade, in stark contrast to global growth of more than 6% per year in the same period. In order to reach its potential, the aquaculture industry must become more environmentally sustainable and address legislative actions.

SEAFARE is designed to provide small-to-medium enterprises and public authorities with tools for sustainable and environmentally friendly aquaculture. It will strengthen links between researchers and industry and influence policy development at regional and national levels. It will deliver innovative solutions for coastal zone management and the sustainable management of economic activity.

SEAFARE is a transnational project that will address the problem of how to develop a thriving and environmentally friendly aquaculture industry across the entire Atlantic Area. Cooperation between the partners will solve important questions relating to how to conduct sustainable aquaculture. This knowledge will then be effectively transferred to the private sector and to other stakeholders. The added value of SEAFARE will generate synergies and focus on knowledge transfer between researchers and industry and between different countries and regions. Project activities will promote alternative production options such as offshore systems. The partnership will also evaluate the issues associated with introducing aquaculture species, using Pacific oysters as a model case study.

SEAFARE will promote sustainable expansion of European aquaculture. It will develop solutions to specific constraints on industry development for Europe's fish and shellfish farmers, with species diversification and development of low-intensity aquaculture systems that are compatible with sensitive coastal habitats. It will provide models for expansion of the aquaculture sector that can be integrated with sustainable management of coastal ecosystems. SEAFARE will add value, generating multidisciplinary synergies and transferring knowledge between researchers and industry, across the Atlantic Area.

Project Partners	
Project Coordinator	Bangor University (United Kingdom)
France	French Research Institute for the Exploitation of the Sea (IFREMER) University of Western Brittany
Ireland	AQUA TT Ltd. University College Cork (AFDC) Marine Institute
Portugal	INRB- National Institute of Biological Resources FORMOSA, Algarve
Spain	IFAPA- The Andalusian Institute for Research &Training in Agricultural, Food, Fisheries and Environment Big Island Fisheries Fitopankton Marino
United Kingdom	Scottish Association for Marine Science (SAMS) Environment Agency Wales North Western & North Wales Sea Fisheries Committee

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SHAREBIOTECH - Sharing life science infrastructures and skills to benefit the Atlantic area Biotechnology sector

Project Details
Funding Programme: INTERREG-1VB
Sub-Programme: Atlantic Area
Priority: 1. Innovation Networks
Project Duration: 2010-2013
Total Project Value: € 2,706,937
EU Grant-Aid: € 1,759,230
Funding to Ireland: € 435,636
Website: www.sharebiotech.net

ShareBiotech

Project Description

ShareBiotech is an INTERREG IVB European Project aiming to strengthen the biotechnology sector within the Atlantic Area by promoting transnational entrepreneurial and innovation networks, and fostering knowledge transfer between companies and research centres, nationally and transnationally.

Sharebiotech will provide support to R&D initiatives in the fields of human health, nutrition, agriculture/food-processing, cosmetics, marine biology and environment. It will facilitate access to national and transnational technological core facilities, provide guidelines for the improvement of service provisions, and support the development of collaborative research projects.

Led by French organisations, the project is implemented by a consortium of 10 partners from 4 Member States (France, Ireland, Portugal and Spain) and 7 regions. It will build on the areas of excellence of the European Atlantic Area, notably in marine science, in the number and diversity of SMEs, and dedicated policy initiatives.

ShareBiotech target audiences are public and private research institutes and SMEs.

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Project Partners	
Project Coordinator	Bretagne Innovation, France
Ireland	National University of Ireland, Galway (NUIG) Athlone Institute of Technology (AIT)
France	University of Nantes CRITT Santé Bretagne
Spain	Government of Navarra, Department of Innovation
Portugal	Biocant Park, Cantanhede University of Algarve (ULAG) Algarve Centre for Marine Sciences (CCMAR) Interdisciplinary Centre for Marine and Environmental Research (CIIMAR)

IMCORE - Innovative Management for Europe's Changing Coastal Resource

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: North West Europe
Priority: ????
Project Duration: 2007-2011
Total Project Value: € 5,993,551
EU Grant-Aid: € 2,996,776
Funding to Ireland: € 435,824
Website: http://www.imcore.eu/

IMCORE
INNOVATIVE MANAGEMENT FOR EUROPE'S CHANGING COASTAL RESOURCE

Project Description

The aim of IMCORE is to promote a transnational, innovative and sustainable approach to reducing the ecological, social and economic impacts of climate change on the coastal resources of North West Europe.

The project will achieve this through demonstrating how the innovative expert couplet approach (i.e. collaboration between coastal practitioners and scientists using the principles of sustainability science) can help with the effective implementation of adaptive management strategies for coastal resources.

Nine Expert Couplet Nodes across NW Europe will be implemented. The project will identify the impacts of a range of specified climate change scenarios on coastal sectors and the development of a response in the form of strategies for adaptive management. An output of IMCORE will be the provision of assistance to coastal managers in the development of adaptive management strategies. IMCORE will also help in the promotion of the adoption of sustainability science for coastal management among coastal practitioners, policy makers and scientists in NW Europe.

Project Partners	
Project Coordinator	University College Cork (CMRC) (Ireland)
Belgium	Maritime Institute University of Gent MDK Coastal Division
France	Centre for Maritime Law and Economy University of Western Brittany SIAGM – Intermunicipal Syndicate for Planning in the Gulf of Morbhian
Ireland	Donegal County Council Cork County Council National Maritime College Ireland
The Netherlands	EUCC - The Coastal Union
United Kingdom	CoastNet, Centre for Coastal & Marine Research (University of Ulster), Aberdeen Institute for Coastal Science and Management, Marine & Coastal Research Group (Cardiff University), Envision Ltd., Sefton Council, Durham Council, Aberdeen City Council

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InTraDE - Intelligent Transportation for Dynamic Environment

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: North West Europe
Priority: Connectivity
Project Duration: 2010-2013
Total Project Value: € 7,033,672
EU Grant-Aid: € 3,516,836
Funding to Ireland: € 82,335
Website: http://www.intrade-nwe.eu/

Project Description

Seaborne trade has been developed in the last decade, mainly due to globalization and developments in emerging countries. This world growth has an influence on the development of ports and maritime terminals. Within North West Europe (NWE), few ports are able to keep pace with this growth, despite the importance of this coastal area stretching from Ireland to the Netherlands).

The InTraDE project contributes to improving the traffic management and space optimisation inside confined space by developing a clean and safe, intelligent transportation system. This system adapts to the specific environmental requirements, and can be transferred to different sizes of ports and terminals. The transportation system operates in parallel with virtual simulation software of the automated site, allowing a robust and real-time supervision of the goods handling operation.

The main aims of the InTrade project are to:

1. Improve productivity of small and medium size regional ports of the region so that they can be more competitive;
2. Contribute to the effort of national and EU governments to divert some road traffic elements to maritime coastal highways by improving the efficiency of Short Sea Shipping within the region;
3. Improve the operational safety and lessen the environmental impact of regional container ports;
4. Reduce the gaps between economically developed and less developed regions.

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Project Partners	
Project Coordinator	University of Science and Technology of Lille (USTL – Lagis) (France)
Belgium	AG Port of Oostende (AGHO)
France	Centre Regional d'Innovation et de Transfert de Technologie – Transport et Logistique (CRITT-TL) Institut National de Recherche et Informatique et Automatique (INRIA-LORIA)
Ireland	National Institute for Transport and Logistics, Dublin Institute of Technology (DIT)
United Kingdom	South East England Development Agency (SEEDA) Liverpool John Moores University (LOOM)
Subcontractors	Oktal, France Robosoft, France

Climate Change Impacts on Coastal Communities and Habitats

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: Northern Periphery
Priority: 2. Sustainable development of natural and community resources
Project Duration: 2007-2008
Total Project Value: € 30,000
EU Grant-Aid: € 18,000
Funding to Ireland: € 4,750
Website: http://www.northernperiphery.eu/en/projects/show/&tid=31

Project Description

This project is a Preparatory Action designed to prepare a more comprehensive project proposal that will examine and quantify the impact of projected climate change on vulnerable low-lying coastal communities and habitats. The aim of the Preparatory Action is to develop relationships between and determine the precise role and task of each partner; identify and establish links with local municipalities to form case studies across the partner regions (Expert Couplet Nodes); identify additional partners as appropriate; review existing knowledge and identify existing climate change initiatives already existing in the participating region.

The Preparatory Action successfully submitted a full proposal CoastAdapt: Sustainable Adaptation to Climate Change in Coastal Communities and Habitats on Europe's Northern Periphery, in March 2008.

Project Partners	
Project Coordinator	Western Isles Council (Scotland)
Ireland	University College Cork (CMRC)
Norway	Norut (Northern Research Institute) Alta
United Kingdom	Scottish Natural Heritage (SNH) Institute for Coastal Science & Management (AICSM), University of Aberdeen UHI Millennium Institute, Environmental Research Institute (ERI) VisitScotland Centre for Coastal and Marine Research (CCMR), University of Ulster

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COASTADAPT – Sustainable Adaption to Climate Change in Coastal Communities and Habitats on Europe's Northern Perphery

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: Northern Periphery
Priority: 2. Sustainable development of natural and community resources
Project Duration: 2007-2008
Total Project Value: € 1,445,226
EU Grant-Aid: € 780,387
Funding to Ireland: € 151,680
Website: www.coastadapt.org/

Project Description

The climate of the North Atlantic coastal regions is changing and sea-level is rising. Of great concern is the increased risk that climate change will bring to the economies and social well-being of North Atlantic coastal communities. **CoastAdapt** is a transnational project that will develop and implement a range of adaptation strategies and tools to enable people living in coastal communities take action to reduce the negative impacts as well as take advantage of the benefits of a changing climate.

CoastAdapt will form an international partnership of local municipalities, environmental organisations and academic institutions to involve local people and local government in a 'bottom-up' approach in the development of adaptive response and preparedness for the impacts of climate change. The project will also consider and develop long-term recovery planning from climate induced natural hazards.

CoastAdapt will produce data; information; tools such as handbooks, vulnerability assessment frameworks, regional scenarios, and adaptation implementation strategies; and climate change networks between pilot study areas and beyond. This project also will provide a sustainable single site, one-stop web-based service to enable these resources to be accessed by end-users not just in the pilot areas, but by coastal communities and local government staff throughout all North Atlantic regions and further afield.

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Project Partners	
Project Coordinator	Western Isles Council (Scotland)
Iceland	Árborg Municipality Municipality of Vik University of Iceland, Institute for Sustainable Development
Ireland	University College Cork (CMRC)
Norway	Hammerfest Kommune Norut (Northern Research Institute) Alta
United Kingdom	Institute for Coastal Science and Management- University of Aberdeen UHI Millennium Institute-, Environmental Research Institute (ERI) Scottish Natural Heritage (SNH) Centre for Coastal and Marine Research- University of Ulster

ECOFISH – Environmentally friendly Fish Farming and the use of Cleaner Fish

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: Northern Periphery
Priority: 1. Promoting innovation and competitiveness in remote and peripheral areas
Project Duration: 2008-2011
Total Project Value: € 1,594,995
EU Grant-Aid: € 884,273
Funding to Ireland: € 256,231
Website: www.eco-fish.org

Project Description

The problem of sea lice infestation of farmed salmon has become a major issue not only for the salmon farmers themselves but also for environmentalists, retailers and consumers who are concerned about the effects of the transfer of lice to wild populations of salmon and the effect that treatments to remove the lice may have on the environment and on the quality of the fish produced. Initially lice were treated with organophosphate pesticides and more recently with hydrogen peroxide. The use of both these materials is now banned, leaving only one effective treatment, emamectin benzoate. However, there is now concern that lice are becoming resistant to this latest effective treatment, so an alternative method of controlling the parasite is urgently needed. One solution that has been tried in recent years is biological control through the use of wrasse which can clean the lice off salmon, thus avoiding the need for any chemical treatments. Whilst this is ostensibly an ideal solution to the problem, the wild capture of the large numbers of wrasse that are needed by the salmon farming industry, has also come under attack from environmentalists, whilst farmers and regulators remain concerned about other diseases being transferred from the wild wrasse to the salmon.

The ECOFISH project seeks to resolve the above issues by developing the technology for spawning and rearing the most promising cleaner fish, ballan wrasse (Labrus bergylta) in captivity. This will allow large numbers of disease free fish to be produced both economically and sustainably. It will also look into the management of wrasse in salmon cages in order to achieve the effective removal of lice whilst at the same time safeguarding the health and welfare of the wrasse themselves.

Project Partners	
Project Coordinator	Bode University College (Norway)
Ireland	National University of Ireland, Galway - Martin Ryan Institute, Indigo Rock Marine Research Station
Norway	Bioforsk, Arctic Agriculture and Land Use Division
United Kingdom	Viking Fish Farms Ltd, Ardtoe Marine Laboratory

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MBEO – Marine based employment opportunities

Project Details
Funding Programme: INTERREG-1VB
Sub-Programme: Northern Periphery
Priority: 1. Promoting innovation and competitiveness in remote and perpherial areas
Project Duration: 2008-2009
Total Project Value: € 26,678
EU Grant-Aid: € 12,970
Funding to Ireland: € 4,827
Website: http://www.northernperiphery.eu/en/projects/show/&tid=42

Project Description

The MBEO project (A Preparatory Action) will seek to facilitate and promote the development of aspects of the marine tourism sector such as fisheries, tourism and seafood based experiences. These are essentially new industries for many peripheral northern communities. These industries are innovative in that they aim to fuse together local marine-based knowledge, culture, heritage and products with tourism and business related skills and knowledge. The project will focus on diversifying income-generating opportunities that are specifically based on local indigenous knowledge of fishing practices, fish movements and local maritime knowledge. The project seeks to help to create a dynamic sub sector within the fishing industry and bring knowledge to areas that have not been included in NPP projects before.

Target areas include:

- Ireland: the offshore islands of Counties Galway, Mayo, Donegal, Sligo, Cork and the mainland; Connemara region of County Galway.;
- Iceland: the Western Fjords;
- Norway: the North Cape area in Finnmark with participants from Repvåg and Honningsvåg.

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Project Partners	
Project Coordinator	Teagasc, Agricultural and Food Development Authority (Ireland)
Iceland	University of Iceland, Reykjavik
Norway	Finnmark University College

WATER - Warning of Algal Toxin Events to support aquaculture in the NPP Coastal Zone Region

Project Details
Funding Programme: INTERREG-IVB
Sub-Programme: Northern Periphery
Priority: 2. Sustainable development of natural and community resources
Project Duration: 2009-2011
Total Project Value: € 1,609,700
EU Grant-Aid: € 870,559
Funding to Ireland: € 226,288
Website: http://www.nppwater.com/

W·A·T·E·R

Project Description

Monitoring of the environment for potentially harmful phytoplankton and their biotoxins in shellfish is a requirement in EU member states. Time delays in achieving results, however, cause unnecessary losses to industry, particularly in peripheral regions.

The WATER project focuses on the provision of new methodologies that will provide:

- rapid, on site analysis for the presence of toxins in shellfish and
- the application of simple procedures whereby harmful phytoplankton events can be predicted.

These techniques are highly suited to peripheral regions. Training courses have been provided and sustainable service routes are being put in place providing these methods to industry; the development of aquaculture throughout the region is thereby facilitated.

Forewarning of harmful events is also provided by the use of simple models, as their prediction is an essential element to further development of the shellfish aquaculture industry.

Project Partners	
Project Coordinator	Martin Ryan Institute, NUI Galway (Ireland)
Faroe Islands	Faroe Marine Research Institute, Torshavn
Norway	Institute for Marine Research, Bergen
Scotland	Marine Scotland, Aberdeen Shetland Fisheries Training Centre Trust, Scalloway, Shetland Islands Scottish Association of Marine Science, Dunstaffnage, Oban Seafood Shetland, Lerwick, Shetland Islands

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SUSTAIN – Assessing Sustainability and Strengthening Operational Policy

Project Details
Funding Programme: INTERREG-IVC
Sub-Programme: Interregional Co-operation
Priority: Regional Initiative Project
Project Duration: 2010-2012
Total Project Value: € 1,884,204
EU Grant-Aid: € 1,485,644
Funding to Ireland: € 113,526
Website: www.sustain-eu.net

SUSTAIN

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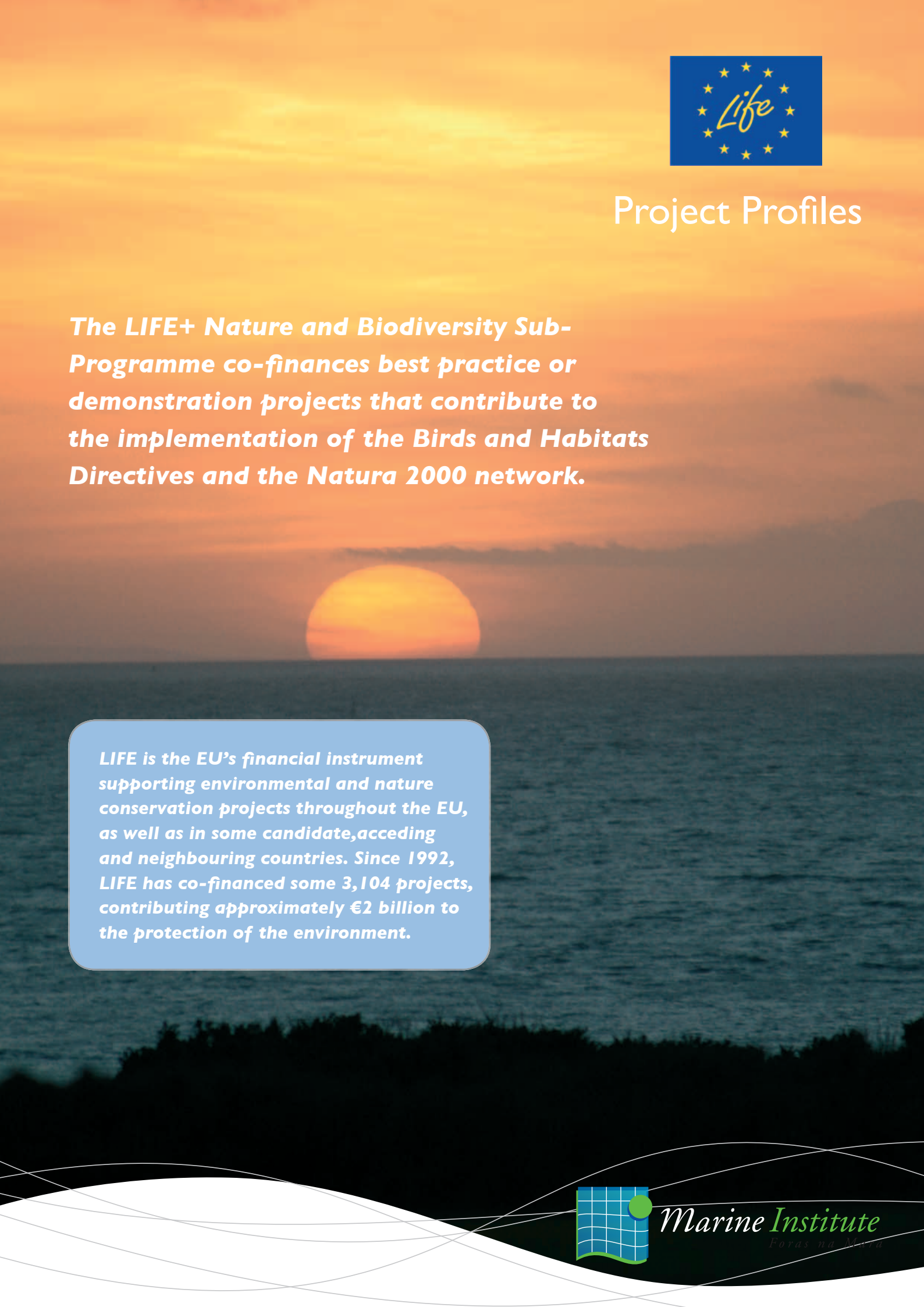
Project Description

The increasing intensity of human activities along our coastlines (e.g. the development of ports and harbours, coastal protection, land reclamation, tourism and sand/gravel extraction) has potential to impact on coastal communities and natural habitats. The EC has adopted a renewed EU Sustainable Development Strategy which aims to bring a high level of environmental protection, social equity and cohesion, economic prosperity and active promotion of sustainable development worldwide. There are multiple inter-linkages between the key challenges, for example between the use of renewable energy and climate change.

They key objective of SUSTAIN is to have in place, at the end of three years, a fully implementable policy tool, applicable for all 22 coastal states of the EU, which will ensure that the integrated management of coastal issues will be sustainable. This entails the agreement within the project of a set of criteria which are readily measurable and which cover both the threats of an unsustainable development and the opportunities provided by a sustainable future which faces all coastal authorities and communities throughout Europe.

The SUSTAIN project partnership comprises 12 partners (including regional and local authorities, universities and NGOs). The project is pan-European in scope with partners representing the North and South Atlantic seaboards, the Mediterranean and Baltic Seas.

Project Partners	
Project Coordinator	The Coastal and Marine Union (EUCC) (The Netherlands)
Cyprus	Kouklia Community Council
France	Service Observatoire Marin SIVOM du Littoral des Maures
Germany	Leibniz Institute for Baltic Sea Research
Greece	Samothraki Municipality
Ireland	University College Cork (CMRC)
Portugal	Administração da Região Hidrográfica do Tejo
Slovenia	Regional Development Centre Koper
Spain	Canary Institute of Marine Science
United Kingdom	Down District Council Sefton Metropolitan Borough Council



Project Profiles

The LIFE+ Nature and Biodiversity Sub-Programme co-finances best practice or demonstration projects that contribute to the implementation of the Birds and Habitats Directives and the Natura 2000 network.

LIFE is the EU's financial instrument supporting environmental and nature conservation projects throughout the EU, as well as in some candidate,acceding and neighbouring countries. Since 1992, LIFE has co-financed some 3,104 projects, contributing approximately €2 billion to the protection of the environment.

Marine Institute
Foras na Mara

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4 An introduction to the LIFE+ Programme (2007-2013)

4.1 What is LIFE+?

The LIFE Programme is the EU's funding instrument for the environment. The general objective of LIFE is to contribute to the implementation, updating and development of EU environmental policy and legislation by co-financing pilot or demonstration projects with European added value.

The current LIFE+ Programme runs from 2007-2013 and has a budget of €2.1 billion. LIFE+ covers both the operational expenditure of DG Environment and the co-financing of projects. According to Article 6 of the LIFE+ Regulation, at least 78% of the LIFE+ budgetary resources must be used for project action grants (i.e. LIFE+ projects).

Proposals can be submitted under one of the programme's three components:

The LIFE+ **Nature and Biodiversity Sub-Programme** co-finances best practice or demonstration projects that contribute to the implementation of the **Birds and Habitats Directives** and the **Natura 2000** network. In addition, it will co-finance innovative or demonstration projects that contribute to the implementation of the objectives of the Commission Communication on Halting the loss of biodiversity by 2010 – and beyond".

The LIFE+ Environment Policy and Governance Sub-Programme co finances innovative or pilot projects that contribute to the implementation of European environmental policy and the development of innovative policy ideas, technologies, methods and instruments. It will also help monitor pressures on the environment.

The LIFE+ Information and Communication Sub-Programme co-finances projects relating to communication and awareness raising campaigns on environmental, nature protection or biodiversity conservation issues.

The LIFE+ Programme issues one call per year. At least 50% of the LIFE+ budget for project co-financing must be dedicated to LIFE+ Nature and Biodiversity projects.

4.2. Who can participate in LIFE+?

LIFE+ is open to public or private bodies, actors or institutions registered in the European Union. Project proposals can either be submitted by a single beneficiary or by a partnership which includes a coordinating beneficiary and one or several associated beneficiaries. They can be either national or transnational, but the actions must exclusively take place within the territory of the 27 Member States of the European Union.

The maximum EU co-financing rate for LIFE+ projects is 50% of the total eligible project costs. By way of exception, a co-financing rate of up to 75% of the total eligible costs may be granted to LIFE+ Nature proposals that focus on concrete conservation actions for priority species or habitat types of the Birds and Habitats Directives.

4.3. How well do Irish researchers compete in LIFE+?

Since the launch of the LIFE programme by the European Commission in 1992, a total of 50 projects have been co-financed in Ireland. Of these, 36 focused on environmental innovation and fourteen on nature conservation. These projects represented a total investment of €99.6 million, of which €41.2 million was contributed by the European Union in grant-aid.

Three previous marine projects (i.e. BIOMAR, ECOPRO and the Bantry Bay ICZM Strategy) are identified with the Irish partners receiving €3.27 million in grant aid out of a total project cost of €7.64 million.

LIFE +

The EU LIFE Programme began in 1992 and to date there have been three complete phases of the programme (LIFE-I: 1992-1995, LIFE-II: 1996-1999 and LIFE-III: 2000-2006). During this period, LIFE has co-financed some 3,104 projects across the EU, contributing approximately €2.2 billion to the protection of the environment. The current LIFE+ Programme runs from 2007 to 2013.

Website: http://ec.europa.eu/environment/life

4 An introduction to the LIFE+ Programme (2007-2013)

Acronym	Project Title	Duration	Irish led partners
BIOMAR	Marine coastal zone management, identification, description and mapping of biotopes.	1992-1996	NPWS / TCD
ECOPRO	Environmentally Friendly Coastal Protection	1992-1996	EOLAS
	Development of a consensus based Integrated Coastal Zone Management Strategy for Bantry Bay	1997-2000	Cork County Council / UCC-CMRC

Table 4.1.
Irish involvement in previous LIFE Marine Projects (1992-2000).

In the current LIFE+ Programme (2007-2013), to-date only one marine project (PISCES: Partnerships Involving Stakeholders in the Celtic Sea Ecosystem) led by the CMRC (UCC) is in receipt of funding.

This text is edited from the official LIFE Programme website: http://ec.europa.eu/environment/life/

PISCES - Partnerships involving Stakeholders in the Celtic Sea Ecosystem

Project Details
Funding Programme: LIFE+ (2007-2013) Project Agreement number Life07 Env/ UK/000943
Sub-Programme: Environment, Policy & Governance
Priority: ???
Project Duration: 2009-2012
Total Project Value: € 2,100,000
EU Grant-Aid: € 1,400,000
Funding to Ireland: € 111,250
Website: http://www.projectpisces.eu/ Follow us on Twitter at:@projectspisces

PISCES

Supporting Sustainable Seas

Project Description

The Celtic Sea marine ecosystem is an area of diverse wildlife and important ecological activity. It is also one of the most heavily used bodies of water in the world with multiple sectors competing for space and resources. Like oceans and seas globally, this region is experiencing pressures due to increasing human activity. In response to this growing problem, the European Commission LIFE+ programme funded the PISCES project: Partnerships Involving Stakeholders in the Celtic Sea Eco-System..

The primary aims of PISCES are to:

- Find new and innovative ways to engage stakeholders in working together on environmentally sound solutions for the region;
- Develop stakeholder understanding of the ecosystem-based approach to marine management;
- Produce a set of stakeholder-led guidelines for an ecosystem-based approach to management of activities in the area.

Current EU-wide marine management policies rely on effective application of an ecosystem-based approach (e.g. the EU Marine Strategy Framework Directive; the Common Fisheries Policy). PISCES is a pioneering project in that it is translating EU maritime policy into practical outputs for multiple sectors and across a multinational area encompassing Ireland, the United Kingdom, France and Spain.

Project Partners	
Project Coordinator	World Wildlife Fund-UK
France	Sea Web
Ireland	University College Cork (CMRC)
Spain	World Wildlife Fund - ES
United Kingdom	The Environment Council (TEC)

For further information contact:

Irish Partner
Sarah Twomey,
Coastal & Marine Research Centre,
ERI,
University College Cork,
Irish Naval Base,
Haulbowline,
Cobh,
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Web: http://cmrc.ucc.ie

NOTES

European Commission
ERASMUS MUNDUS

Project Profiles

The EU Erasmus Mundus Scholarship and Academic Cooperation Programme aims to enhance quality in higher education through scholarships and academic cooperation between Europe and the rest of the world through the formation of graduate exchange programmes.

Marine Institute
Foras na Mara

Table of Contents

5 An introduction to the Erasmus Mundus Programme

5.1. What is Erasmus Mundus?

Erasmus Mundus is a cooperation and mobility programme in the field of higher education that aims to enhance the quality of European higher education and to promote dialogue and understanding between people and cultures through cooperation with Third-Countries. In addition, it contributes to the development of human resources and the international cooperation capacity of Higher education institutions in Third Countries by increasing mobility between the European Union and these countries.

The Erasmus Mundus programme provides support to:

- Higher Education Institutions to implement joint programmes at postgraduate level (Action 1) or to set-up inter-institutional cooperation partnerships between universities from Europe and targeted Third-Countries (Action 2);
- Individual students, researchers and university staff to spend a study / research / teaching period in the context of one of the above mentioned joint programmes or cooperation partnerships (Action 1 and Action 2);
- Any organisation active in the field of higher education to develop projects aimed at enhancing the attractiveness, profile, visibility and image of European higher education worldwide (Action 3).

5.2. Who can participate in Erasmus Mundus +?

The Erasmus Mundus Programme (2009-2013) is open to higher education institutions and to any organisation active in the field of higher education and research as well as to students, doctoral candidates, teachers, researchers and university staff (academic and/or administrative) from any part of the world.

Regular Calls for Proposals are published which specify the activities covered, the application criteria and the budgetary allocations and grant-aid levels relevant to the call concerned.

5.3. How well do Irish researchers compete in Erasmus Mundus

To date, the Irish marine community is involved in only one Erasmus Mundus project, being represented by the Galway-Mayo Institute of Technology (GMIT) in the MARES: Doctoral Programme on Marine Ecosystem Health and Conservation project led by the University of Ghent, Belgium (see MARES profile).

Erasmus Mundus

Action 1: Joint Programmes including scholarships.

Action 2: Partnerships with Third Country higher education institutions and scholarships for mobility

Action 3: Promotion of European Higher Education.

Web-site: http://eacea.ec.europa.eu/erasmus_mundus/index_en.php

This text is edited from the official Erasmus Mundus Programme website: http://eacea.ec.europa.eu/erasmus_mundus/index_en.php

MARES - Doctoral Programme in Marine Ecosystem Health & Conservation.

Project Details

Funding Programme:
ERASMUS MUNDUS

Sub-Programme:
A1: Joint Programmes

Priority:
?????

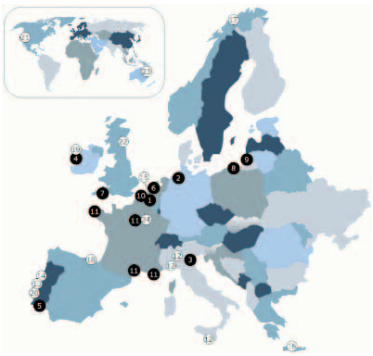
Project Duration:
2010-2014

Total Project Value:
€ 5,146,000

EU Grant-Aid:
€ 5,146,000

Funding to Ireland:
€ 367,000

Website:
http://www.mares-eu.org



For further information contact:

Irish Partner
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Project Description

MARES is a three-year world-class Joint Doctoral Programme offered by a consortium of 24 partner institutions (11 full partners and 13 associated members) originating from 14 countries. Ghent University (Belgium) is the MARES coordinator.

All MARES doctoral candidates study with two of the partner institutions and are awarded a joint Ph.D. degree (Doctorate in Marine Sciences). In connection with the annual call for applications, the MARES doctoral programme publishes a catalogue of MARES PhD research topics within the applied scientific fields of Marine Ecosystem Health and Conservation.

MARES focuses on six scientific and applied fields all dealing with the effects of impacts of humans on the natural marine environment:

1. Future Oceans : temperature changes - hypoxia – acidification;
2. Understanding biodiversity effects on the functioning of marine ecosystems;

Project Partners	
Project Coordinator	Ghent University (Belgium)
Australia	Department of Employment, Economic Development and Innovation/James Cook University
Belgium	Flanders Marine Institute (VLIZ) Dredging, Environmental and Marine Engineering (DEME)
France	Université Paris Marie Curie (UPMC) Centre National de la Recherche Scientifique (CNRS)
Germany	University of Bremen
Greece	Hellenic Centre for Marine and Environmental Research (HCMR)
Ireland	Galway-Mayo Institute of Technology (GMIT), Irish Whale and Dolphin Group (IWDG)
Italy	University of Bologna Pavia University
Lithuania	Klaipeda University
Netherlands	Netherlands Institute for Sea Research (NIOZ)
Norway	Aquaplan-NIVA
Poland	University of Gdansk
Portugal	University of Algarve University of Aveiro Interdisciplinary Centre for Marine and Environmental Research (CIIMAR) Portuguese Association of Trawlers
Spain	AZTI-Tecnalia
United Kingdom	University of Plymouth Ecologic UK Ltd.
United States	The Nature Conservancy (Global Marine Team)

NOTES

Acknowledgments

The authors/editors would like to thank all those who contributed to this Directory. These include: the various Irish EU funded project participants who responded generously to our many queries and questions, and in particular those who responded to the on-line questionnaire; the National Delegates responsible for the various EU funded programmes who were a wealth of information and finally Felicity Donnelly (Marine Institute) for her patience and contribution to the design and layout of this document.

Annexes

ANNEX I - Irish participants in EU funded programmes

		No. of Projects			
Irish Partner	Profile	FP7	Interreg IV	Life+	Erasmus Mundus
Algae Health Ltd.	SME	1	-	-	-
AquaTT	Association/Network	6	1	-	-
Athlone Institute of Technology	3rd Level Institute	-	1	-	-
Atlantic Shellfish Ltd.	SME	1	-	-	-
Bord Iascaigh Mhara (BIM)	Public Institute	-	1	-	-
Cartron Point Shellfish ltd.	SME	1	-	-	-
Central Fisheries Board	Public Research Institute	1	1	-	-
Chartered Institute of Logistics and Transport	Association	1	-	-	-
Clew Bay Marine Forum Ltd.	SME	1	-	-	-
Clew Bay Oyster Co-operative Society Ltd	SME	1	-	-	-
Cork County Council	Public Body	-	1	-	-
Cork Institute of Technology	3rd Level Institute	1	1	-	-
County Wexford Partnership (A/P)	Association	-	1	-	-
Cybercolloids Ltd	SME	1	-	-	-
Daithi O'Murchu Marine Research Station (DOMMRS) Ltd	SME	2	-	-	-
Department of Communications, Energy and Natural Resources	Public Body	-	1	-	-
Donegal County Council	Public Body	-	2	-	-
Dublin Institute for Advanced Studies	3rd Level Institute	1	-	-	-
Dublin Port Company.	SME	1		-	-
Dundalk Institute of Technology	3rd Level Institute	1	1	-	-
Ecological Consultancy Services Ltd.	SME	1	-	-	-
Economic and Social Research Institute (ESRI)	Public Research Institute	1	-	-	-
Galway-Mayo Institute of Technology	3rd Level Institute	-	-	-	1
Geological Survey Ireland	Public Research Institute	1	-	-	-
Green Biofuels Ireland Ltd	SME	1	-	-	-
Indigo Rock Marine Research Station Ltd	SME	-	2	-	-
Ionad Forbartha Gno t/a WESTBIC	Association	-	1	-	-
Irish Canoe Union	Association	-	1	-	-
Irish Exporters' Association	Association	2	-	-	-
Irish Farmers Association	Association	1	-	-	-
Jersey Sea Farms (Ireland)	SME	1	-	-	-
Limerick Institute of Technology	3rd Level Institute	1	-	-	-
Marigot Ltd	SME	1	-	-	-
Marine Computation Services Ltd	SME	1	-	-	-
Marine Institute	Public Research Institute	14	3	-	-
Marine Law and Ocean Policy Research Centre Services Ltd	SME	1	-	-	-
Mayo County Council	Public Body	-	1	-	-
Mid-Western Regional Authority	Public Body	-	1	-	-
National Institute for Transport and Logistics, DIT	3rd Level Institute	-	1	-	-
National Maritime College of Ireland	3rd Level Institute	-	1	-	-
Nautical Enterprise Centre Ltd.	SME	4	-	-	-
Nowcasting Ireland Ltd	SME	1	-	-	-

ANNEX I - Irish participants in EU funded programmes

		No. of Projects			
Irish Partner	Profile	FP7	Interreg IV	Life+	Erasmus Mundus
National University of Ireland, Galway	3rd Level Institute				-
	Earth and Ocean Sciences	3	-	-	-
	Dept. of Civil Engineering	-	1	-	-
	Dept. of Geography	-	1	-	-
	Irish Seaweed Centre	-	1	-	-
	Martin Ryan Institute	4	3	-	-
	Other	2	-	-	-
Numerics Warehouse Ireland Ltd	SME	1	-	-	-
Ocean Energy Ltd.	SME	1	-	-	-
O'Malley Fisheries	SME	1		-	-
Port of Cork	SME	1	3	-	-
Port of Dublin	SME	-	1	-	-
Port of Waterford	SME	-	1	-	-
John F. Kennedy Trust	Association	-	1	-	-
Sea & Shore Safety Ltd	SME	1	-	-	-
Sustainable Energy Authority of Ireland (SEAI)	Public Research Institute	1	-	-	-
Shannon Regional Fisheries Board	Public Research Institute	-	1	-	-
Skytech Ltd.	SME	1	-	-	-
Sligo Institute of Technology	3rd Level Institute	-	1	-	-
Teagasc	Public Research Institute	-	1	-	-
Techworks Marine Ltd	SME	1	-	-	-
Transas Group	SME	1	-	-	-
Trinity College Dublin	3rd Level Institute	2	-	-	-
Udaras na Gaeltachta	Public Body	-	1	-	-
University College Cork	3rd Level Institute				-
	Aquaculture & Fisheries Development Centre (AFDC)	1	2	-	-
	Coastal & Marine Research Centre (CMRC)	8	5	1	-
	Environmental Research Centre (ERC)	1	-	-	-
	Hydraulics & Maritime Research Centre (HMRC)	6	-	-	-
	Tyndall Institute	1	-	-	-
	Zoology, Ecology & Plant Science (ZEPS)	2	2	-	-
University College Dublin	3rd Level Institute	1	1	-	-
University of Limerick	3rd Level Institute	2	-	-	-
Wavebob Ltd	SME	1	-	-	-

ANNEX 2 - National EU Funding Programme Contact Points

FP7: www.fp7ireland.com/contacts.aspx

Programme	Contact Points	Organisation	E-mail
Co-operation			
Health	Dr. Caitriona Creely	Health Research Board	ccreely@hrb.ie
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	Dr. Stephen O'Reilly	Enterprise Ireland	stephen.oreilly@enterprise-ireland.com
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	Mr. Philip Cheasty	Enterprise Ireland	philip.cheasty@enterprise-ireland.com
	Dr. Sergio Fernandez-Ceballos	Enterprise Ireland	sceballos@enterprise-ireland.com
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	Dr. Brian Donlon	Environmental Protection Agency	b.donlon@epa.ie
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Security	Dr. Michael Murphy	Enterprise Ireland	michael.murphy@enterprise-ireland.com
Space	Dr Barry Fennell	Enterprise Ireland	Barry.fennell@enterprise-ireland.com
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	Ms Sorcha Carthy	Irish Research Council for the Hamanities and Social Sciences	scarthy@irchss.ie
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Capacities			
Research Infrastructures	Mr John Lynch	Higher Education Authority	jlynch@hea.ie
	Ms Sarah Dunne	Higher Education Authority	sdunne@hea.ie
Research for the benefit of SME's	Mr Sean Burke	Enterprise Ireland	sean.burke@enterprise-ireland.com
Regions of Knowledge	Dr. Imelda Lambkin	Enterprise Ireland	imelda.lambkin@enterprise-ireland.com
Research Potential	Dr. Conor O'Carroll	Irish Universities Association	mariecurie@iua.ie
Science in Society	Dr. John Denari	IRCSET	jdenari@ircset.ie
	Dr Martin Hynes	IRCSET	mhynes@ircset.ie

ANNEX 2 - National EU Funding Programme Contact Points

Programme	Contact Points	Organisation	E-mail
Support for the coherent development of research policies	Dr. Imelda Lambkin	Enterprise Ireland	imelda.lambkin@enterprise-ireland.com
Activities of International Co-operation	Dr. Imelda Lambkin	Enterprise Ireland	imelda.lambkin@enterprise-ireland.com
Euratom			
Fission and Fusion Research	Dr. Imelda Lambkin	Enterprise Ireland	imelda.lambkin@enterprise-ireland.com
JRC			
Joint Research Centre	Dr. Imelda Lambkin	Enterprise Ireland	imelda.lambkin@enterprise-ireland.com

INTERREG-IV

Programme	Contact Points	Organisation	E-mail
Co-operation			
Ireland-Wales	Siobhan Rudden	Southern & Eastern Regional Assembly	srudden@seregassembly.ie
Ireland, Northern Ireland and Western Scotland	Nuala Cormican	SEUPB	interreg@seupb.eu
INTERREG-IVB			
Atlantic Area	Michael O'Brien	BMW Regional Assembly	mobrien@bmwassembly.ie
North-West Europe	Sonja Maurus	Southern & Eastern Regional Assembly	smaurus@seregassembly.ie
Northern Periphery	Michael O'Brien	BMW Regional Assembly	mobrien@bmwassembly.ie
INTERREG-IVC			
Interregional Co-operation			

Life+

Programme	Contact Points	Organisation	E-mail
	Ms Breda Baily	Department of the Environment, Heritage and Local Government	Breda_Baily@environ.ie

Erasmus mundus

Programme	Contact Points	Organisation	E-mail
	Ms Eileen O'Connell	Higher Education Authority	eoconnell@hea.ie

ANNEX 3 - The National Sea Change Strategy (2007-2013)

Sea Change is the short name for the national marine research, development and innovation strategy as set out in the 2006 Marine Institute Report "Sea Change: A Marine Knowledge, Research & Innovation Strategy for Ireland 2007-2013".

The Sea Change Strategy sets out a vision of future economic, social, environmental and technological opportunities and challenges for the marine/maritime sector (Table A3.1) and a roadmap for selective and managed investment in marine research and innovation. As such, Sea Change is not a Marine Institute / Department of Agriculture, Fisheries and Food strategy, but a strategy for all State investment in the marine sector.

Sea Change is the marine component of the Irish Government's national Strategy for Science Technology and Innovation (2006-2013). The research strategy and agenda for the emerging advanced high-tech marine sector is outlined in a more recent contribution "SMARTOCEANS" published by the Marine Institute in 2010.

The Sea Change Strategy describes research priorities and targets under four Measures (Figure A3.1):

1. Industry: research supporting industry and industry objectives in the productive sector (6 programmes);
2. Discovery: initiatives to facilitate new research capacities and expertise to support development in emerging sectors of the economy (4 programmes);
3. Policy Support: research to under pin and provide the knowledge for evidence-based policy and regulation (4 programmes);
4. Infrastructure: to provide essential and specialised infrastructures to support the research programme.

2020 Vision for the Marine Sector:
In 2020, the Irish marine sector will sell into specialised global and local markets in a dynamic, innovative and technologically driven manner, by means of strong industry research partnerships, a skilled workforce and a strategic capability that responds to markets and technology. It will be internationally recognized for its high quality marine environment and characterized by coherent policy and regulation. Sea Change (2006).

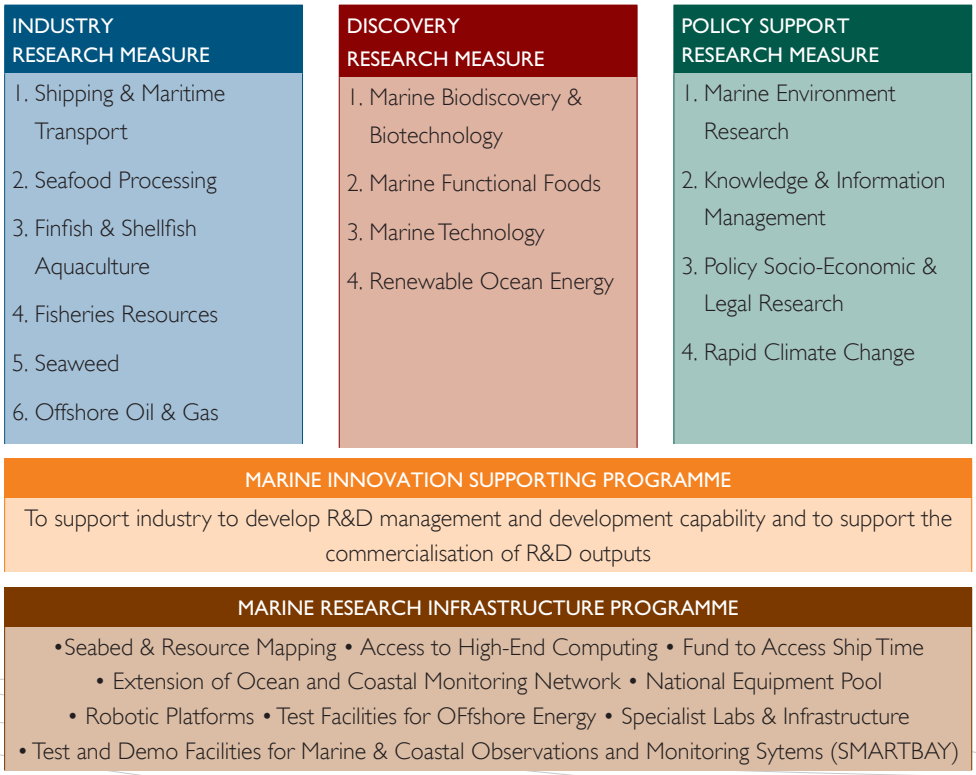

Figure A3.1.
Sea Change Research Measures and Programmes.

ANNEX 3 - The National Sea Change Strategy (2007-2013)

Key Objectives of the Sea Change Strategy are to:

1) Assist the existing, and largely indigenous marine sub-sectors to improve overall competitiveness and engage in activity that adds value to their outputs by utilising knowledge and technology arising from research in the natural sciences, engineering and commerce;
2) Build new research capacity and capability and utilise fundamental knowledge and technology to create new marine-related commercial opportunities and companies;
3) Inform public policy, governance and regulation of the sector and support the delivery of more innovative customer driven public services by applying the knowledge derived from marine research and monitoring;
4) Increase the marine sector's competitiveness and stimulate the commercialisation of the marine resource in a manner that ensures its sustainability and protects marine biodiversity and ecosystems;
5) Strengthen the economic, social and cultural base of regional communities that depend on the marine resource.

Table A3.1. Key objects of the Sea Change Strategy.

Funding for marine research and innovation (including infrastructural support) comes mainly from public investment and in particular from the science and technology component of the National Development Plan (NDP) 2007-2013 (e.g. The NDP Marine Research Programme, administered by the Marine Institute, and other sectoral NDP Funded Programmes administered by HEA, EI, SFI, etc.).

Investment, to-date (2007-2010), in marine research, development and innovation related to Sea Change priorities is over €150 million (Figure 1.1). This consists of:

- Direct competitive funding awarded under the NDP Marine Research Programme (€52 million, of which €6 million is for infrastructure).
- Other national competitive research programmes (€64.8 million), and
- Competitive EU Programmes (FP7, INTERREG-IV) (€33 million).

Useful References:

Department of Enterprise, trade and Employment (2006). Strategy for Science Technology and Innovation (2006-2013). 93pp.

Marine Institute (2006). Sea Change: A Marine Knowledge, Research & Innovation Strategy for Ireland 2007-2013. Marine Institute (Galway). ISBN: 1-902895-31-2. 138pp.

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Marine Institute (2010). SMARTOCEAN Ireland: Harnessing Ireland's Potential as a European and Global Centre for Ocean Technologies. Marine Institute (Galway). 56pp.

ANNEX 4 - Alphabetical Project Acronym Listing

Acronym	Project Duration	Project Title	Funding Programme	Page No.
AARC	2010-2012	Atlantic Aquatic Resource Conservation	INTERREG-IV	106
ACCESS	2010-2013	Arctic Climate Change, Economy and Society	FP7	64
AIRSEA	2008-2012	Air-sea fluxes of climatically relevant gases in the marine atmospheric boundary layer	FP7	85
ANCORIM	2009-2012	Recherche Atlantique por la Prevention de la Gestion des Risques Littoraux	INTERREG-IV	107
AQUAEXCEL	2010-2013	Aquaculture Infrastructures for Excellence in European Fish Research	FP7	66
Aquafuels	2010-2013	Algae and aquatic biomass for a sustainable production of 2nd generation befuels	FP7	34
AquaInnova	2009-2012	Supporting governance and multi-stakeholder participation in aquaculture research and innovation	FP7	22
AQUAMED	2009-2012	The future of research on aquaculture in the Mediterranean Region	FP7	23
AQUAPHAGE	2011-2015	Network for the development of phage therapy in Aquaculture	FP7	84
ARCOPOL	2008-2011	Atlantic Regions' Coastal Pollution, Response and Preparedness	INTERREG-IV	108
ASIMUTH	2010-2013	Applied Simulations and Integrated Modelling for the Understanding of Toxic and Harmful Algal Blooms	FP7	61
ATLANTOX	2008-2010	Advanced tests about new toxins in the Atlantic area	INTERREG-IV	109
AZIPILOT	2008-2011	Intuitive Operation and Pilot Training when Using Marine Azimuthing Control Devices	FP7	55
BAMMBO	2010-2013	Sustainable production of biologically active molecules of marine based origin	FP7	24
BioMara	2009-2013	Blue Energy- Sustainable Fuels from Marine Biomass	INTERREG-IV	103
BIOTECMAR	2009-2011	Biotechnological exploitation of marine products and by-products	INTERREG-IV	110
BIVALIFE	2010-2013	Management of infectious diseases in oysters and mussels in Europe	FP7	25
CAE	2008-2011	Cruise Atlantic Europe	INTERREG-IV	111
CARBOCHANGE	2010-2013	Changes in carbon uptake and emission	FP7	40
Celtic Wave	2009-2012	Developing a Sea of Smiles	INTERREG-IV	97
CLAMER	2009-2011	Climate Change and Marine Ecosystem Research Results	FP7	41
Climate Change Impacts	2007-2008	Climate Change Impacts on Coastal Communities and Habitats (Preparatory Project)	INTERREG-IV	123
COASTADAPT	2009-2012	Sustainable Adaptation to Climate Change in Coastal Communities and Habitats on Europe's Northern Periphery	INTERREG-IV	124
COEXIST	2009-2012	Interaction in Coastal Waters: A Roadmap to sustainable integration of aquaculture and fisheries	FP7	26
ComENVIR	2010-2013	Communicating environmental impacts on water quality, availability and use	FP7	42
CORALFISH	2008-2012	Assessment of the interactions between corals, fish and fisheries in order to develop monitoring and predictive modelling tools for ecosystem based management in the deep waters of Europe and beyond	FP7	43
CORES	2008-2011	Components for Ocean Renewable Energy Systems	FP7	35
CSTP	2009-2012	Celtic Sea Trout Project	INTERREG-IV	98
CURE	2010-2012	Croatian Underwater Robotics Research Potential	FP7	67
DEEPFISHMAN	2008-2011	Management & Monitoring of deep-sea fisheries and stocks	FP7	27
EASYCO	2008-2011	Collaborative Atlantic Space Biogeochemical Forecasting System	INTERREG-IV	112
ECOFISH	2008-2010	Environment Friendly Fish Farming and Use of Cleaner Fish	INTERREG-IV	125
ECOJEL	2008-2012	Managing the Opportunities and Detrimental Impacts of Jellyfish in the Irish Sea	INTERREG-IV	99
ECOKNOWS	2009-2013	Effective use of ecosystems and biological knowledge of fisheries	FP7	28
EELA-2	2009-2011	E-Science Grid Facility for Europe and Latin America	FP7	68
EELIAD	2008-2012	European eels in the Atlantic: Assessment of their Decline	FP7	44

ANNEX 4 - Alphabetical Project Acronym Listing

Acronym	Project Duration	Project Title	Funding Programme	Page No.
E-freight	2009-2011	European E-Freight Capabilities for Co-Modal Transport	FP7	56
EMSO	2008-2012	European Multidisciplinary Seafloor Observation	FP7	69
EquiMAR	2008-2011	Pre-normative Research for Ocean Energy	FP7	36
EURO_BASIN	2010-2013	North Atlantic Ocean and associated shelf-seas protection and management options	FP7	45
EuroArgo	2008-2010	Global Ocean Observing Infrastructure	FP7	70
EUROFLEETS	2008-2012	Towards an Alliance of European research fleets	FP7	71
GEO-SEAS	2009-2013	Pan-European Infrastructure for Management of Marine and Ocean Geological and Geophysical Data	FP7	72
HERMIONE	2009-2012	Hotspot ecosystem research and man's impact on European seas	FP7	46
HYFFI	2008-2010	Hydrocolloids as functional food ingredients for gut health	FP7	78
IMCORE	2007-2011	Innovative Management for Europe's Changing Coastal Resource	INTERREG-IV	121
InTraDE	2010-2012	Intelligent Transportation for Dynamic Environment	INTERREG-IV	122
ISLES	2011-	Irish Scottish Links on Energy Study	INTERREG-IV	104
JERICO	2010-2013	Marine Observatory for the Study of Anthropogenic and Climate Impacts in Temperate Coastal Waters	FP7	73
KIMERRA	2010-2012	Maritime Clusters: Creation of bridges between scientific knowledge and firms with marine resources	INTERREG-IV	113
KM3NET-PP	2008-2011	Preparatory phase for a deep sea facility in the Mediterranean for neutrino astronomy and associated sciences	FP7	74
KNOWSEAS	2008-2012	Knowledge-based Sustainable Management for Europe's Seas	FP7	47
MABFUEL	2008-2012	Marine Algae as Biomass for Biofuel	FP7	86
MAREN	2008-2011	Marine Renewable Energy- Energy Extraction and Hydro-environmental aspects	INTERREG-IV	114
MARES	2010-2014	Doctoral Programme on Marine Ecosystem Health and Conservation	Erasmus Mundus	138
MARINA	2009-2013	MARINA platform project will establish a set of equitable and transparent criteria for the evaluation of multi-purpose platforms for marine renewable energy (MRE)	FP7	37
MaRINET	2010-2012	Marine Renewable Infrastructure Network for Energy Technologies	FP7	75
MarineTT	2009-2011	European Marine Research Knowledge Transfer and Uptake of Results	FP7	48
MBEO	2008-2009	Marine Based Employment Opportunities	INTERREG-IV	126
MEFEPO	2008-2011	Making European Fisheries Ecosystem Operational	FP7	29
MESH-ATLANTIC	2010-2013	Mapping European Seabed Habitats	INTERREG-IV	115
MESMA	2008-2012	Monitoring and evaluation of spatially managed areas	FP7	49
MG4U	2010-2013	Marine Genomics for Users: Marine Genomics Support and Coordination Action	FP7	30
MIDTAL	2008-2012	Micro-arrays for the detection of toxic algae	FP7	50
MusselsAlive	2008-	Development of best practice and new technology for grading, handling, transportation, conditioning and storage of mussels for SMEs in the European mussel industry	FP7	79
MyOcean	2009-2013	Development and pre-operational validation of upgraded GMES Marine Core Services and Capabilities	FP7	62
NEA2	2009-2011	Nautisme Espace Atlantique II	INTERREG-IV	116
NetAlgae	2010-2012	Inter-regional network to promote sustainable development in the marine algal industry	INTERREG-IV	117
NETMAR	2010-2013	Open Service Network for Marine Environmental Data	FP7	32
ODEMM	2009-2013	Options for Delivering Ecosystem-based Marine Management	FP7	51
ORECCA	2009-2011	Offshore Renewable Energy Conversion platforms- Coordination Action OREC-CA	FP7	38

ANNEX 4 - Alphabetical Project Acronym Listing

Acronym	Project Duration	Project Title	Funding Programme	Page No.
OYSTERECOVER	2008-	Establishing the scientific bases and technical procedures and standards to recover the European flat oyster production through strategies to tackle the main constraint, bonamiosis	FP7	80
PERSEUS	2010-2013	Protection of European seas and borders through the intelligent use of surveillance	FP7	57
PESI	2008-2012	A pan-European species-directories infrastructure	FP7	76
PISCES	2010-2012	Partnership Involving Stakeholders in the Celtic Sea Ecosystem	LIFE+	133
PREVENT ESCAPE	2008-2011	Assessing the causes and developing measures to prevent the escape of fish from sea-cage aquaculture	FP7	31
PROPOSSE	2008-2010	Promotion del Short Sea Shipping y Cooperation con Pymes	INTERREG-IV	118
PROPS	2008-2011	Promotional Platform for Short Sea Shipping and Intermodality	FP7	58
Rising Tide	2009-2012	Connecting Celtic Communities	INTERREG-IV	100
Sail West	2009-2013	Sail West Leisure Project	INTERREG-IV	105
SALSEA-Merge	2008-2011	Advancing understanding of Atlantic Salmon at Sea: Merging genetics and ecology to resolve stock-specific migration and distribution patterns	FP7	52
SCSC	2010-2013	SMART COASTS=SUSTAINABLE COMMUNITIES	INTERREG-IV	101
SEAFARE	2010-2012	Sustainable and Environmentally friendly Aquaculture for the Atlantic Region of Europe	INTERREG-IV	119
SEAS ERA	2010-2014	Towards an Integrated European Marine Research Strategy and Programme	FP7	53
SETTLE	2008-	Bivalve conditioning and settlement- keys to competitive hatchery production	FP7	81
ShareBiotech	2010-2013	Sharing life science infrastructures and skills to benefit the Atlantic area biotechnology sector	INTERREG-IV	120
SHOAL	2009-2012	Search and Monitoring of Harmful contaminants, other pollutants and leaks in vessels in port using a swarm of robotic fish	FP7	33
SKEMA	2008-2011	Sustainable Knowledge Platform for the European Maritime and Logistics Industry	FP7	59
STANDPOINT	2008-2011	Standardisation of Point Absorber Wave Energy Convertors by Demonstration	FP7	39
SUDEVAB	2008-2010	Sustainable development of European SMEs engaged in abalone aquaculture	FP7	82
SUPPORT	2009-2013	Security Upgrade for Ports	FP7	60
SUSFISH	2009-2012	Shellfish productivity in the Irish Sea: Working towards a sustainable future	INTERREG-IV	102
SUSTAIN	2010-2012	Assessing Sustainability and Strengthening Operational Policy	INTERREG-IV	128
TeamSafety	2008-	The development of an innovative 3D virtual team-training maritime safety simulation platform to meet the latest EU safety requirements for sea and seafarers' emergency response training	FP7	83
VECTORS	2010-2013	Vectors of Change in Oceans and Seas Marine Life: Impact on Economic Sectors	FP7	65
WATER	2009-2011	Warning of Algal Toxin Events to Support Aquaculture in the NPP Coastal Zone Region	INTERREG-IV	127
WAVETRAIN II	2008-2012	Initial training network for wave energy research professionals	FP7	87
WISER	2010-2013	Water bodies in Europe: Integrative Systems to assess Ecological status and Recovery	FP7	54

ANNEX 5 - Glossary of Acronyms used

AA	Atlantic Area
AFDC	Aquaculture and Fisheries Development Centre (UCC)
AS	Atlantic Space
ASAP	Atlantic Salmon Arc Project (INTERREG-III)
AUV	Autonomous Underwater Vehicle
BMW	Border-Midlands-West Region
CMRC	Coastal and Marine Research Centre (UCC)
CO2	Carbon Dioxide
CSO	Central Statistics Office
DAFF	Department of Agriculture, Fisheries and Food
DG TREN	EU Directorate General for Energy and Transport
DNA	Deoxyribonucleic Acid
DOMMRS	Daithi O'Murchu Marine Research Station Ltd
EATIP	European Aquaculture Technology and Innovation Platform
EC	European Commission
EEA	European Economic Area
EEZ	Economic Exclusion Zone
EGEE	Enabling Grids for E-Science
EI	Engineers Ireland
EIFAC	European Inland Fisheries Advisory Commission
EMSA	European Maritime Safety Agency
EoL	Encyclopaedia of Life
ERA	European Research Area
ERDF	European Regional Development Fund
ERI	Environmental Research Institute(UCC)
EU	European Union
EUMIS	European Marine Information System
EUNIS	European Nature Information System
FP6	EU 6th Framework Programme (2002-2006)
FP7	EU 7th Framework Programme (2007-2013)
FRONTEX	European Agency for the Management of Operational Cooperation at the External Borders

ANNEX 5 - Glossary of Acronyms used

GBIF	Global Biodiversity Information Facility
GEOSS	Global Earth Observation System of Systems
GHG	Greenhouse gases
GMES	Global Monitoring for Environment and Security
GMIT	Galway-Mayo Institute of Technology
GOOS	Global Ocean Observation System
HAB	Harmful Algae Blooms
HD	Habitats Directive
HEA	Higher Education Authority
HMRC	Hydraulics and Maritime Research Centre (UCC)
HNS	Hazardous and Noxious Substances
ICAN	International Coastal Atlas Network
ICES	International Council for the Exploration of the Sea
ICPC	International Cooperation Partner Countries
ICT	Information and Communication Technologies
IEC	International Electrotechnical Commission
INSPIRE	Infrastructure for Spatial Information in Europe
IPCC	Intergovernmental Panel on Climate Change
IRCSET	Irish Research Council for Science Engineering and Technology
ISM	International Safety Management
ISPS	International Ship and Port Facility
IT	Information Technology
IWRM	Integrated Water Resource Management
JRC	Joint Research Centre
KBBE	Knowledge Based Bio-Economy
LIT	Limerick Institute of Technology
LMWP	Low molecular weight polysaccharides
MRE	Marine Renewable Energy
MSFD	Marine Strategy Framework Directive
NCC	Network Control Centre
NDP	National Development Plan

ANNEX 5 - Glossary of Acronyms used

NGI	National Grid Initiative
NGO	Non-Governmental Organisation
NPA	Northern Periphery Area
NPWS	National Parks and Wildlife Service
NPZD	Nutrient-Phytoplankton-Zooplankton-Detritus
NREN	National Research and Education Network
NUIG	National University of Ireland, Galway
NWE	North West Europe
OCG	Open Geospatial Consortium
OpenDAP	Open Source Project for a Network Data Access Protector
OWC	Oscillating Water Column
pCO2	Carbon Dioxide partial pressure
PTO	Power-Take-Off
R&D	Research and Development
RAC	Regional Advisory Council (for Fisheries)
RE	Renewable Energy
RNA	Ribonucleic Acid
RoI	Republic of Ireland
ROV	Remotely Operated Underwater Vehicle
rRNA	Ribosomal Ribonucleic Acid
RTD	Research, Technology and Development
S & T	Science and Technology
SEIS	Shared Environmental Information System
SEUPB	Special European Union Programmes Body
SFI	Science Foundation Ireland
SISE	Single Information Space in Europe for the Environment
SME	Small to Medium size Enterprise
SPCs	Short Sea Promotion Centres
SRA	Strategic Research Agenda
SSN	SafeSeaNet
SSS	Short Sea Shipping
TCD	Trinity College Dublin
TDWG	Taxonomic Databases for Plant Sciences

ANNEX 5 - Glossary of Acronyms used

UCC	University College Cork
UCD	University College Dublin
UN	United Nations
UNCLOS	United National Convention on the Law of the Sea
UREAD	University of Reading
W3C	World Wide Web Consortium
WEC	Wave Energy Convertor
WFD	Water Framework Directive
WHO	World Health Organisation
WP	Work Package
ZEPS	Zoology, Ecology and Plant Science (UCC)

ANNEX 6 - EU Funding Programme Websites

FP7	http://cordis.europa.eu/fp7/home_en.html
INTERREG-IV	
IVA Ireland-Wales	http://www.irelandwales.ie/
IVA N. Ireland-Scotland-RoI	http://www.seupb.eu/Home.aspx
IVB Atlantic Area	http://atlanticarea.inescporto.pt/
IVB North-West Europe	http://www.nweurope.eu/index.php
IVB Northern Periphery Area	http://www.northernperiphery.eu/en/home/
IVC Europe	http://www.interreg4c.net/
LIFE+	http://ec.europa.eu/environment/life/
ERASMUS MUNDUS	http://eacea.ec.europa.eu/erasmus_mundus/index_en.php

Also:

Marine Institute EU Research Funding website:	www.marine.ie/home/funding/InternationalFunding/
EurOCEAN Directory of EU Funded Marine Projects	www.mapinfobase.eurocean.org/

NOTES

International Cooperation,
Strategic Planning and Development Services,
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